

Forest Certification: A Policy Perspective



Christopher Elliott

Forest Certification: A Policy Perspective

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Forest Certification: A Policy Perspective

Christopher Elliott



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Office address: Jalan CIFOR, Situ Gede, Sindang Barang, Bogor 16680, Indonesia

Mailing address: P.O. Box 6596 JKPWB, Jakarta 10065, Indonesia

Tel.: +62 (251) 622622; *Fax:* +62 (251) 622100

E-mail: cifor@cgiar.org

Website: <http://www.cifor.cgiar.org>

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Foreword

The study of forest policy has traditionally been the affair of specialists and has had limited resonance beyond the forestry community. Fortunately, this is now changing rapidly, as the multiple roles of forests become better understood and the diversity of stakeholders increases. It is now appreciated that forest policy issues are complex, and even fascinating, in their own right, and that understanding them can yield empirical and theoretical insights in fields ranging from anthropology, through ecology to political science. This evolution has been influenced by a number of trends, among which three stand out. The environmental aspects of forest management have moved from a marginal issue in the 1970s to centre stage in 2000. Issues relating to land rights of indigenous peoples have now gained prominence around the world. Meanwhile, the contribution that community-based forest management can make to poverty alleviation is being recognised.

This thesis by Christopher Elliott should be seen within the context of a broadening interest in forest policy. The subject is forest certification, a highly dynamic and controversial issue, at the interface between private and public policy. The thesis uses the Advocacy Coalition Framework (an actor-based method for studying policy processes) to analyse developments on forest certification in Canada, Sweden and Indonesia. In doing so, it makes significant theoretical and empirical contributions to the study of forest policy instruments. However, the interest of certification and labelling is not limited to forestry. Labelling products with a mark of origin to provide the consumer with information about the social and environmental aspects of production is becoming common with foods, clothing and other products. Similarly, bringing stakeholders together to agree on standards for natural resource management, is now seen as desirable in many areas

Although the opinions expressed in the thesis are those of the author, our three institutions have played a supportive role. Part of the research, and the development of the theoretical framework, was carried out while Christopher Elliott was based at CIFOR as a visiting fellow. Chris wrote and defended his thesis as a student in the Chair of Ecosystem Management at the Swiss Federal Institute of Technology, Lausanne. Finally, Chris has worked for a number of years for WWF International and is now the Director of the “Forests for Life Campaign”.

We strongly recommend this outstanding book to practitioners, decision-makers, scholars and students in the fields of forestry and conservation.

Dr Claude Martin
Director General
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Acronyms and Abbreviations

AAC	Annual Allowable Cut
ACF	Advocacy Coalition Framework
ACP	African, Caribbean and Pacific
AF&PA	American Forest and Paper Association
AGTF	Attorneys' General Task Force
AHP	Analytic Hierarchy Process
APHI	Association of Indonesian Concession Holders
APKINDO	Indonesian Wood Panel Association
ASMINDO	Indonesian Furniture and Handicrafts Producers Association
ATO	African Timber Organization
BAPEDAL	National Environmental Impact Management Agency (Indonesia)
WBCSD	World Business Council for Sustainable Development
CASCO	Committee on Conformity Assessment
CBD	Convention on Biological Diversity
CCFM	Canadian Council of Forest Ministers
CEN	Canadian Environmental Network
CFIC	Canadian Forest Industries Council
CFS	Canadian Forest Service
CGIF	Consultative Group on Indonesian Forestry
C&I	Criteria & Indicators
CIEL	Centre for International Environmental Law
CIFOR	Center for International Forestry Research
CITES	Convention on Trade in Endangered Species
COFI	Council of Forest Industries of British Columbia
CORE	Commission on Resources and Environment (Canada)
CPPA	Canadian Pulp and Paper Association
CSA	Canadian Standards Association
CSCE	Conference on Security and Cooperation in Europe
CSD	United Nations Commission on Sustainable Development
CSFCC	Canadian Sustainable Forestry Certification Coalition
CTE	World Trade Organization's Committee on Trade and the Environment
EBRI	Economic and Business Review Indonesia
EEB	European Environmental Bureau
EIU	Economist Intelligence Unit
EMAS	European Eco-Management and Audit Scheme

EMS	Environmental Management System
EPA	United States Environmental Protection Agency
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCGB	Forestry Commission of Great Britain
FME	Forest Movement Europe
FMUL	Proposal for the Pan-European Forest Management Unit Level
FOE	Friends of the Earth
FRBC	Forest Renewal British Columbia
FSAC	Forest Sector Advisory Coalition (Canada)
FSC	Forest Stewardship Council
FT	Financial Times
FTA	Free Trade Agreement
GATT	General Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GII	German-Indonesian Initiative
GNB	Government of New Brunswick
GOC	Federal, Provincial and Territorial Governments of Canada
GOI	Government of Indonesia
ha	hectare(s)
HPH	Forest Concession (Indonesia)
IFF	International Forum on Forests
IHT	International Herald Tribune
IIED	International Institute for Environment and Development
ILO	International Labour Organization
IMF	International Monetary Fund
IPB	University of Bogor (Indonesia)
IPF	Intergovernmental Panel on Forests
ISA	Indonesian Sawmillers Association
ISCI	Intergovernmental Seminar on Criteria and Indicators for Sustainable Forest Management
ISO	International Organization for Standardization
ITTA	International Tropical Timber Agreement
ITTC	International Tropical Timber Council
ITTO	International Tropical Timber Organization
IUCN	World Conservation Union
IUFRO	International Union of Forestry Research Organizations
IWA	International Woodworkers of America
KPHP	Production Forest Management Unit (Indonesia)

LATIN	Indonesian Tropical Institute
LEEC	London Environmental Economics Centre
LEI	Indonesian Ecolabelling Institute
MCPFE	Ministerial Conference on the Protection of Forests In Europe
MEAs	Multilateral Environmental Agreements
MEE	Danish Ministry of Environment and Energy
MFN	Most favoured nation
MFUL	Forest Management Unit Level
MOF	Ministry of Forestry (Indonesia)
MPI	Indonesian Forestry Community
MTK	Finnish Central Union of Agricultural Producers and Forest Owners
NAFTA	North American Free Trade Agreement
NBF	National Board of Forestry (Sweden)
NDP	New Democratic Party (Canada)
NFC	Nordic Forest Certification
NFSC	National Forest Strategy Coalition (Canada)
NGO	Non-governmental organisation
NRMP	Natural Resources Management Project (Indonesia)
NT	National Treatment
NWIP	New Work Item Proposal
OECD	Organization for Economic Co-operation and Development
P&C	Principles and Criteria
PPI	Pulp and Paper International
PPM	Process and Production Methods
PVC	Polyvinyl Chloride
RKT	Indonesian for Annual Allowable Cut
RMI	Indonesian Institute for Forest and Environment
SAS	Swiss American Securities–Credit Suisse
SCA	Svenska Cellulosa Aktiebolaget (Sweden)
SCC	Standards Council of Canada
SCS	Scientific Certification Systems
SEPA	Swedish Environmental Protection Agency
SFIA	Swedish Forest Industries Association
SFM	Sustainable Forest Management
SGS	Société Générale de Surveillance
SI	Swedish Institute
SKEPHI	Indonesian Network on Tropical Forest Conservation
SOS	Sveriges Officiella Statistik (Sweden)
SSNC	Swedish Society for Nature Conservation

SWG	Swedish FSC Working Group
TAG	Transmigration Advisory Group (Indonesia)
TBT	Technical Barriers to Trade
TC	Technical Committee
TCF	Totally Chlorine Free
TFAP	Tropical Forestry Action Plan/Programme
TFL	Tree farm licence
TTJ	Timber Trades Journal
UBC/UPM	University of British Columbia/Agricultural University of Malaysia
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESC	United Nations Economic and Social Council
UNGAS	United Nations General Assembly
WALHI	Indonesian Forum for the Environment
WBCSD	World Business Council for Sustainable Development
WCED	World Commission on Environment and Development
WRM	World Rainforest Movement
WTO	World Trade Organization
WWF	World Wide Fund for Nature
YKLI	Indonesian Consumers' Organization

Abstract

The tropical forest crisis of the 1980s, and subsequent international recognition of problems in temperate forest management and conservation, led to a search for policy instruments to promote sustainable forest management. Forest certification was promoted from 1990 onwards, initially by conservation NGOs, as such a policy instrument. Certification is an indirect economic incentive with two objectives: improved forest management and the provision of better market access for certified products. By June 1998, over 10 million hectares of forests had been certified. At the same time, certification had become one of the most controversial topics in international forest policy discussions, partly because it had been promoted by NGOs and thus was seen as a threat to government forest departments or the forest industry, in some countries.

This dissertation analyses the development of certification programmes in three countries (Indonesia, Canada and Sweden) using the Advocacy Coalition Framework (ACF) as a theoretical reference point. The ACF is an actor-based framework for analysing policy processes, and has not previously been applied in a developing country. Actors in the three countries took different approaches to certification. In Canada, in a programme development process supported by the forest products industry, a management systems approach was taken. In Sweden, performance standards were developed

in a process initially driven by NGOs. In Indonesia, certification was led by an NGO within a framework established by government, and a performance standards approach was used.

The dissertation concludes that forest certification can be best understood as a policy instrument which promotes and facilitates policy-orientated learning among actors, and provides indirect incentives for improved forest management. Learning occurs both as the standards to be used for certification are developed, and as they are implemented. The benefits of learning and consensus-building among actors (such as NGOs, forest companies, private forest owners, indigenous peoples, governments, etc.) who have traditionally been in conflict with each other can be significant. On the other hand, where fundamental changes in forest policy (such as tenure and forest revenue reform) are needed, certification should not be seen as a substitute for these changes.

A further conclusion is that, while public policies change over periods of decades, the private policies of retailers and forest product companies can adapt more rapidly to changing circumstances. The concept of a “fast track” of private policy change, compared to the slower track of governmental policy change, is therefore proposed and described. A number of interesting theoretical and empirical avenues for further research on certification are discussed.

Version Abrégée

Cette thèse analyse le développement de programmes d'écocertification des forêts dans trois pays : l'Indonésie, le Canada et la Suède. L'écocertification est une incitation économique indirecte qui poursuit deux objectifs essentiels : une amélioration de la gestion de la forêt et un meilleur accès au marché pour les produits certifiés. L'écocertification est une réponse aux problèmes de déforestation des forêts tropicales et des différents problèmes au niveau de la gestion et la conservation des forêts tempérées. Suite à la prise de conscience internationale du danger, fin des années 80, une recherche d'instruments politiques est menée pour assurer une gestion durable des ressources forestières. C'est dans ce contexte que des ONG écologistes proposent pour la première fois, l'écocertification des forêts. En juin 1998, ce sont plus de 10 millions d'hectares de forêts qui sont certifiés. En même temps, l'écocertification devient un thème brûlant lors de discussions internationales. Ce nouvel instrument suscite des réactions de méfiance de la part d'instances gouvernementales et industrielles dans un certain nombre de pays, notamment en raison du fait qu'il est au départ proposé par des ONG.

L'approche théorique retenue pour l'analyse des programmes d'écocertification s'appuie sur l'Advocacy Coalition Framework (ACF). L'ACF est un cadre d'analyse basé sur le concept d'acteurs, qui sert à étudier les processus d'élaboration de politiques publiques. C'est la première fois que l'ACF (qui a été formulé aux Etats Unis) est utilisé dans le cadre d'un pays en voie de développement (l'Indonésie). Dans chaque pays, le processus de formulation d'un programme d'écocertification est différent. Au Canada, dans un processus soutenu par l'industrie forestière, une

approche basée sur les systèmes de gestion de l'environnement est adoptée. En Suède, dans un processus initié par des ONG, des standards de performances sont développés. Enfin en Indonésie, le processus est mené par une ONG dans un cadre défini par le gouvernement, et des standards de performances sont également établis.

La conclusion de la thèse est que l'écocertification forestière doit être conçue comme un instrument qui favorise des processus d'apprentissage et d'échanges entre acteurs et qui fournit des incitations indirectes pour une gestion forestière améliorée. L'apprentissage peut avoir lieu aussi bien pendant le développement des standards de certification, que pendant leur mise en application. Les bénéfices des échanges et de l'élaboration du consensus entre des acteurs (tels que les ONG, l'industrie forestière, les propriétaires privés, les peuples autochtones et les gouvernements), souvent en situation de conflit, peuvent être considérables. Cependant, dans des situations où il est nécessaire de procéder à des modifications importantes des politiques publiques afin d'assurer une gestion durable de la forêt, l'écocertification ne doit pas être considérée comme une alternative à ces amendements. Les recherches ont permis de constater que s'il est vrai que les politiques publiques évoluent sur des périodes qui sont mesurés en décennies, les politiques d'entreprises des détaillants et des exploitations forestières sont susceptibles d'évoluer beaucoup plus rapidement. Le concept d'une "piste rapide" pour la modification des "politiques privées" est donc proposé et décrit. Enfin, l'écocertification offre des possibilités empiriques et théoriques pour d'autres projets de recherches, et un certain nombre de ceux-ci sont examinés.

Introduction

PROBLEM STATEMENT

Labelling is a feature of all social communication. It is therefore an aspect of public policy. Labelling refers to a relationship of power in that the labels of some are more easily imposed on people and situations than those of others. It is therefore an act of politics involving conflict as well as authority. (Wood 1985: 347)

Labelling wood products with a mark of quality can be traced back in Europe to a French royal decree of 1637, which stipulated that members of the guild of cabinet makers had to mark the furniture they made (Pradère 1989). The label, which was a stamp marked on the wood, enabled members of the guild to maintain a monopoly on the production of high-quality furniture. It was therefore an expression of the power of the guild. As such, it came under criticism and was abandoned after the French revolution in 1789 (Watson 1956).

In the 1990s under the name of “forest certification”, other forms of labelling wood have emerged, with the objective of identifying products from well-managed forests. These are also labels of quality, but of the quality of forest management rather than the skill of the cabinetmaker. Despite this difference, they are also expressions of power. This thesis examines how forest certification programmes have emerged in a number of countries, and analyses the actors and processes involved.

Forest certification is a process which results in a written certificate being issued by an independent third-party, attesting to the location and management status of a forest that is producing timber (Baharuddin and Simula 1994: 9-10).

There are normally two components:

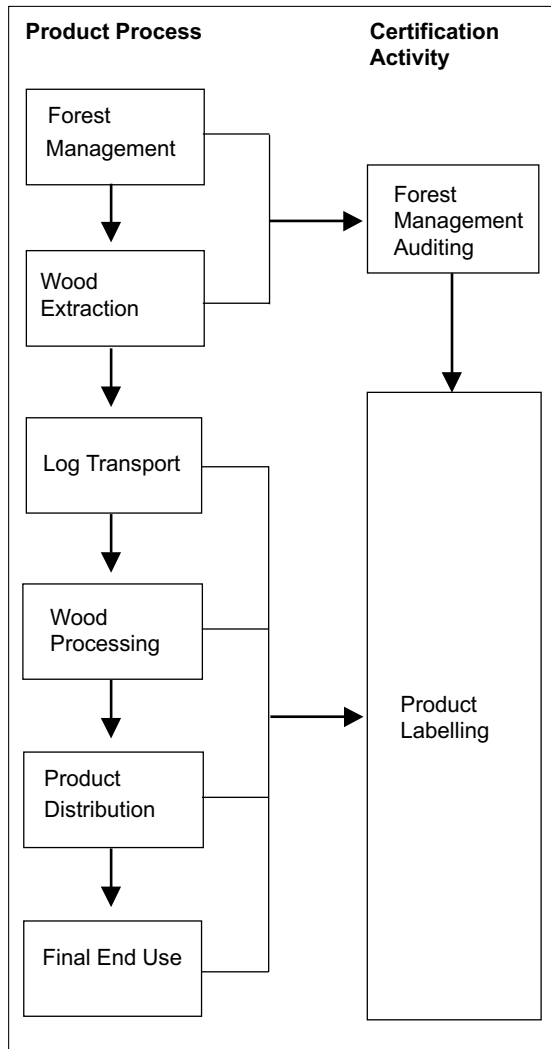
- 1) **Forest management auditing** involves inspection of forest management on the ground against specific standards, and a review of relevant documents such as management plans, working plans, inventories, etc. Certification of forest management can be carried out at different levels ranging from the forest management unit, to the region or country. Existing certification programmes work at the level of the management unit.
- 2) **Product labelling** involves tracing roundwood and processed timber products through the “chain-of-custody” (or supply chain) which runs from the forest floor through processing and distribution to the final purchaser. This involves tracking the certified material through log transport and processing, shipping and further processing.

The result of these two processes is a label on a product, which can be identified by a consumer. Figure 1 summarises the forest certification process.

The first certification was carried out in Indonesia in November 1990 by the SmartWood programme of the Rainforest Alliance, an NGO

based in New York (Crossley 1995: 36). Since then, certification has developed rapidly, and by June 1998 at least 10 million hectares of forests in 25 countries had been certified (FSC 1998a).

Figure 1. The Forest Certification Process



Source : Baharuddin and Simula (1994: 11)

The rapid growth of certification has not been without controversy. In March 1997, the Food and Agriculture Organization of the United Nations (FAO) stated that:

Certification and the associated issue of labelling is one of the most topical and

controversial subjects in forestry at the present time. Certification seeks to link trade in forest products, particularly international trade, to the sustainable management of the forest resource, enabling those who so wish to purchase products coming from sustainably managed forests (FAO 1997a: 1).

It is interesting to study controversial issues. However, the interest of certification as a research topic lies not only in the controversies themselves, but in the actors and contexts involved. Forest policy is traditionally seen as a branch of public policy, yet in certification we find cases of NGOs and private sector actors taking the lead on issues rather than government forest departments. In terms of context, national-level developments on certification cannot be understood without reference to international timber markets and to the international forest policy debate. In short, the development of certification can only be understood by reference to increasingly globalised economies and to policy processes involving multiple actors and fora. These actors and contexts are not only found in the case of forest certification. They are increasingly common in other environmental and social issues, and a study of forest certification should yield some lessons of wider applicability.

GOAL AND OBJECTIVES OF THE THESIS

This dissertation analyses the development of forest certification programmes in selected countries from a policy network perspective. The goal is to understand which national and international actors are supporting or opposing certification and why, and how certification may contribute towards the improvement of forest management practices.

This thesis has three objectives in line with this goal:

- 1) to describe and analyse the policy process which led to the development of forest certification programmes in Canada, Sweden

- and Indonesia from a policy network perspective, using the Advocacy Coalition Framework (ACF) as a theoretical framework;
- 2) to contribute to a better understanding of the potential strengths and weaknesses of forest certification as an incentive for better forest management, and to make some recommendations for the improvement of the three certification programmes; and
 - 3) to review the strengths and weaknesses of the Advocacy Coalition Framework and make some recommendations for modifications to it, if necessary.

The ACF was developed in the early 1990s as an actor-based framework for analysing policy change. It has been used to study a number of environmental controversies in North America and Europe.

When research for this thesis began in mid-1994, forest certification was just beginning. Under these circumstances, it was not possible to evaluate the effectiveness, efficiency or impacts of certification in terms of improved forest management or market benefits for producers. Accordingly, a policy analysis approach was taken and it was decided that the focus of research would be on how and why forest certification programmes were emerging as policy instruments in the mid-1990s in selected countries. The thesis reviews and analyses the development of forest certification in Indonesia, Canada and Sweden. These countries were selected to show a range of different types of certification systems in major timber-producing countries. The international policy dialogue on certification is also discussed.

Since 1994, certification has attracted increasing attention in international fora where forest policies are discussed and in the media. The International Tropical Timber Organization (ITTO) has commissioned three studies of the status of certification programmes (Baharuddin and Simula 1994, 1996, 1997) and a study of the markets for certified timber (Wadsworth and Boateng 1996). Upton and Bass (1995) produced a handbook on forest certification. In 1996, Viana and his colleagues published a discussion of some

of the policy issues raised by certification (Viana *et al.* 1996). In the same year, several intersessional meetings on certification were organised under the auspices of the Intergovernmental Panel on Forests (IPF) which led to a variety of reports and papers (e.g., UBC/UPM 1996). The IPF's work was divided into a number of programme areas. Two of these ("Criteria and indicators for sustainable forest management" and "Trade and environment in relation to forest products and services") involved research and discussions on forest certification (UNESCO 1996a,b).

BACKGROUND TO THE DEVELOPMENT OF FOREST CERTIFICATION

The International Forest Crisis of the 1980s

The term "crisis" is overused to the extent that its meaning is no longer clear. Gameson (1990) has defined crises as system-wide events beyond the control of any actor. Looking back to the origin of the word, we find the Greek word *krisis* meaning "decision". We can thus define crises as system-wide events beyond the control of any actor, but which require policy responses from the relevant actors. Both these criteria were met for the international forests crisis which emerged in the 1980s.

Threats to the world's forests had attracted increasing attention from the general public, the media and "policy-makers" since the early 1980s and led to a crisis situation by the middle of the decade (WCED 1987: 2-4; Poore *et al.* 1989: 1). The main issues were tropical deforestation, the loss of old-growth forests in temperate and boreal zones, threats to forest biodiversity and ecological functions, and land rights of indigenous people. These subjects can be summarised (with the exception of the last one) under the categories of deforestation and forest degradation.

Based on data from the Food and Agriculture Organization of the United Nations (FAO), forests covered about one-quarter of the earth's land area in 1995, a total of 3454 million ha. Approximately

1419 million ha were temperate and boreal forests in industrialised countries (FAO 1997b: 10). The average annual deforestation rate in the tropics during the 1980s was estimated to be 15.4 million ha (FAO 1995: 20), a compound annual rate of 0.8%. In 1997, FAO (1997b: 17) estimated that the annual deforestation rate for the period 1990-1995 was somewhat lower at 13.7 million ha. In the temperate and boreal zones, there was an increase of 2 million ha of the forest area of Europe in the 1980s. There were also increases in Australia and New Zealand, but a decline of 3.2 million ha in the USA, mostly due to urban and infrastructural development (FAO 1995: 14-23). Pressure on old-growth temperate forests and damage from pollution and fires in some areas can both reduce forest quality (FAO 1994: 2).

FAO does not issue figures on forest degradation. However one study using satellite images estimated that, between 1986 and 1993, 19% of the world's rainforest area was degraded (Jang *et al.* 1996). In another study of Amazonia, the rates of degradation (from closed to open forest), and fragmentation (from continuous to discontinuous forest), were estimated to be 3.8 million ha per year between 1978 and 1988, twice the deforestation rate in the region (Skole and Tucker 1993).

Costs of deforestation and forest degradation are high. Recent research in the Amazon has indicated that the potential present value of net revenue from the sale of non-timber forest products such as fruits, bark and resins harvested from natural forests may be as high as US\$2380 per ha. This is significantly higher than the revenue from alternative land uses in the region after deforestation, such as cattle ranching (Grimes *et al.* 1994). Other research in the same region has shown that undisturbed tropical rainforest in the Amazon is a net absorber of carbon dioxide (Grace *et al.* 1995) which gives forests added significance in the ongoing debate about measures to mitigate climate change. Overall, FAO estimates that the annual contribution of forest products to the world economy is approximately US\$400 000 million, and that forestry currently provides subsistence and wage employment equivalent to 60 million work-years worldwide, of which 80% is in developing countries (FAO 1994: 3).

International Policy Responses

Degradation or deforestation of individual forest sites has been noted since antiquity (e.g., Mather 1990: 30-3). However, it was only in the late 20th century that forest loss was perceived as a global problem. The initial focus of attention was tropical forests. One of the first accounts was published by Aubréville (1938), but it was not until the publication of several assessments of the status of tropical forests approximately 20 years ago (Sommer 1976; Lanly and Clément 1979; Myers 1980; FAO 1982), that the need for international action to conserve forests (i.e., to stop deforestation and forest degradation) was widely accepted by governments and international institutions.

This led to a number of policy responses in the 1980s: the initiation of the Tropical Forestry Action Plan (TFAP) in 1985, and the establishment of the International Tropical Timber Organization (ITTO) in 1986. These are primarily mechanisms for providing funding and technical assistance to projects in developing countries, but also fora for discussing policy reforms in these countries. The activities of TFAP, ITTO and other initiatives, involved an increase of official development assistance for forestry, from US\$400 million per year in 1985 to more than US \$1350 million per year in 1991 (FAO 1994: 16).

However, the increases in funding and political and media attention associated with TFAP and ITTO had not led to a reduction in deforestation rates by the early 1990s. This situation resulted in calls from environmental NGOs, and also from within FAO, United Nations Development Programme (UNDP) and The World Bank, for reform of international collaboration to promote forest conservation (e.g., The World Bank 1991; FAO 1994; Cassels 1995). The Director of the UNDP forestry programme was quoted as declaring:

Deforestation is clearly out of control, certainly beyond the control of foresters, and we need an urgent re-examination of all ongoing programmes and policies (Lankester cited in Colchester and Lohmann 1990: i).

Reform of international collaboration on forests was prominent in the agenda of the 1992 United Nations Conference on Environment and Development (UNCED), and in various preparatory meetings and processes. After some controversy between developed and developing countries, UNCED (1992a,b) produced a set of non-binding “Forest Principles” and Chapter 11 of “Agenda 21”, rather than the forest convention that many developed countries had been promoting. Although this was disappointing to some, the “global consensus” on forests represented by these two documents does have some significant features, which have influenced subsequent discussions on forests. After UNCED, the UN Commission on Sustainable Development (CSD) was created to monitor progress in implementing Agenda 21 and other agreements reached at UNCED. In 1995, the CSD established an Ad hoc Intergovernmental Panel on Forests (IPF) to promote and review action at the national and international level to implement UNCED decisions relating to forests, and in 1997 the International Forum on Forests (IFF) was created to continue this work.

The Emergence of Forest Certification

In 1989, Friends of the Earth and several other NGOs, supported by the UK government, proposed that ITTO carry out a project:

studying the possibility of labelling timber, including both logs and manu-factured wood products, from tropical forests to indicate whether they came from forests managed for sustainable production (ITTO 1991: 3).

However, Malaysia, Indonesia and the Philippines expressed concerns that NGOs might call for boycotts of unlabelled timber, and the proposal was not accepted in its original form. Instead, ITTO eventually carried out a broader study of the incentives required to promote sustainable management of tropical forests (ITTO 1991).

The fact that ITTO did not carry out the proposed feasibility study encouraged NGOs to move towards setting up their own labelling schemes, rather than depending on governments and intergovernmental organisations. Subsequently, the establishment of certification systems was recommended in *Caring for the Earth* (IUCN 1991: 132), published jointly by the World Conservation Union (IUCN), United Nations Environment Programme (UNEP) and World Wide Fund For Nature (WWF). In a 1993 publication entitled *Surviving the Cut*, the World Resources Institute (which had been one of the founders of the TFAP) made a positive assessment of the possibilities of certification and noted that “timber certification systems offer a first critical step towards sustainable forestry” (Johnson and Cabarle 1993: 50).

The London Environmental Economics Centre recommended certification as an incentive for sustainable forest management in a report on incentives for sustainable forest management commissioned by ITTO (LEEC 1993: v). The World Bank also expressed support for certification, although with a preference that it be developed under the auspices of ITTO (The World Bank 1991: 58).

In summary, international initiatives such as TFAP and ITTO had not made a visible impact on global or regional deforestation rates by the late 1980s, and were criticised in consequence, particularly by NGOs. Before UNCED, there were therefore calls from some governments, development aid agencies and NGOs for reform of these international initiatives, but no major changes were made. In addition, in the late 1980s, there was an increased interest in the use of economic incentives for improving natural resource management (OECD 1989) and in environmental labelling (OECD 1991a). The relationship between trade and the environment was also becoming an international policy issue. It was in this context that forest certification emerged in the early 1990s as a policy instrument initially promoted by conservation NGOs, to address the problems of deforestation and forest degradation.

POTENTIAL BIAS AND LIMITATIONS OF THE THESIS

It has already been mentioned in this introduction that certification is a controversial topic. I have been involved in some of the controversies as WWF International's Senior Forest Officer and as a chair of the board of the Forest Stewardship Council. Although I left both these positions before starting work on this thesis, my own experience has clearly informed and influenced my perspectives on certification. Such experience could be either seen as a strength or as a weakness when it comes to policy analysis and scientific research. I view it as a strength, but it will be up to readers of this study to form their own opinions on whether I have been able to achieve an adequate level of objectivity in my research and analysis.

The selection of case-study countries was based on the expectation that certification programmes would develop in these countries. This expectation was confirmed. However, it should be noted that at the same time, in a number of other countries, certification programmes failed to develop successfully. The findings of the thesis will not necessarily be valid in these situations, or other cases where certification processes might begin in the future. A second limitation of the thesis, which has already been noted, is that

because certification is a new policy instrument it was not possible to formally evaluate its effectiveness, efficiency or impacts.

STRUCTURE OF THE THESIS

The thesis consists of seven chapters:

Chapter 1 defines the problem to be studied, explains the goals and objectives of the thesis and presents forest certification within the context of a global forest crisis.

Chapter 2 provides an overview of the international policy context within which certification programmes have evolved, and shows some of the links between international and national policy debates.

In chapter 3, the theoretical framework and research methods of the thesis are presented.

Chapters 4-6 consist of case studies of the development of forest certification in Indonesia, Canada and Sweden respectively.

In chapter 7, the conclusions of the thesis are presented within the framework of the goal and objectives.

Chapter 1

Forest Certification: An Introduction

This chapter introduces forest certification as a policy instrument and shows how it operates in practice. The chapter also presents the two main approaches to certification, one based on management systems and the other based on performance standards. The information in this chapter serves as a basis for the discussion of individual certification programmes later in the thesis.

1.1 OBJECTIVES OF FOREST CERTIFICATION

Two primary objectives of forest certification have been identified in the literature, together with a number of secondary objectives (Baharuddin and Simula 1994; Upton and Bass 1995; Viana *et al.* 1996):

Primary objectives are:

- to improve the environmental, social and economic quality of forest management; and
- to ensure market access for certified products, particularly in “ecosensitive” markets with high environmental awareness.

The **secondary objectives** that have been identified include:

- improved control of logging operations and reduction of illegal harvesting; higher recovery of royalties and taxes;
- increased transfer of funds to forest management;
- internalisation of environmental costs in timber prices;

- encouragement for investment in wood-processing industries; improved productivity and cost savings in the production chain from forest to end-user; and
- improved transparency in forest management and trade.

The secondary objectives vary widely from programme to programme and the discussion in this thesis will therefore focus on primary objectives.

1.2 CERTIFICATION AS A POLICY INSTRUMENT

Certification is an economic policy instrument with environmental and trade objectives. Economic instruments for environmental protection have been defined by the Organization for Economic Co-operation and Development (OECD) as:

instruments that affect costs and benefits of alternative actions open to economic agents, with the effect of influencing behaviour in a way that is favourable to the environment (OECD 1991b: 10).

A basic objective of economic instruments is to ensure an appropriate pricing of natural resources in order to promote their efficient use and allocation. In a 1996 OECD report on economic incentives for biodiversity conservation, over 40 types were identified and divided into four categories (Table 1.1).

Table 1.1 Categories and Examples of Economic Instruments for Biodiversity Conservation

	Category of Economic Instrument			
	Positive Incentives	Disincentives	Indirect Incentives	Removal of Perverse Incentives
Examples	Agricultural land set-aside schemes	User fees	Individual transferable fishing quotas	Reform of tax structures
	Public land purchases	Fines for damages	Ecolabelling (including certification)	Full-cost pricing for water services
	Incentive payments for organic farming	Performance bonds		Reform of public forestry concession pricing

Source: OECD (1996: 9)

It will be noted that this table lists certification as an economic instrument, under the heading of ecolabelling, which is defined as:

the provision of information about product characteristics, such as those that relate to the environment, to enable more informed consumer purchasing decisions and to differentiate products and create markets for the differentiated products (OECD 1996: 141).

Ecolabelling and certification are classified as “indirect incentives”, and defined as:

any mechanism that creates or improves upon markets and price signals for biological resources, encouraging the conservation and sustainable use of biological diversity (OECD 1996: 141).

In its discussion of indirect incentives, the OECD report mentions *appellation d’origine* labels in agriculture and in forest certification. It states that both may address the problem of unsustainable consumption by providing information to consumers who can then modify their product choices, if they wish. Referring to forest certification, the report notes:

Underlying these schemes is the premise that trade in timber can provide powerful incentives for the achievement of

sustainable forest management. Sustainably produced timber may be higher-priced than competing non-sustainably produced timber. In this case, only by differentiating the products can the producers hope to recover all or part of the additional costs of sustainable production (OECD 1996: 129).

1.3 CERTIFICATION IN PRACTICE

Certification is a process involving a number of different actors and steps. The actors may include certifiers, accreditors, forest managers, forest owners, wood buyers, stakeholders and government agencies. The roles of some of these actors are outlined in Box 1.1. The usual steps in the certification process are:

Step 1. The forest manager decides to seek certification because he/she anticipates some benefits in terms of improved market access, image or forest management.

Step 2. Contact is made with a certifier who makes a visit to the operation and carries out a preliminary assessment of the feasibility and cost of certification. A preliminary report is given to the forest manager.

Step 3. If the forest manager decides to proceed, a full assessment is carried out. In this assessment, a team of specialists engaged by the certifier

Box 1.1 Key Actors in Certification

Certifiers: The certifier is a third party that is independent from the forest manager. Certifiers may be non-profit or commercial enterprises. Their task is to assess the quality of the forest organisation to be certified using a pre-established set of standards. This involves field visits and checking administrative procedures of the organisation.

Accreditors: The role of the accreditor is to ensure that the certifier is following reliable and transparent procedures in its assessments, and that the attributes of the certification programme (and accompanying label, if relevant) are clearly presented to consumers. Most countries have government-authorised accreditation bodies, but private accreditation is also possible.

Forest managers: The forest manager is responsible for managing the forests of the organisation to be certified. The organisation may be a private forest owner, a community, a company or a government body. Similarly, the manager may be an individual or group, with the mandate to manage the organisation's forests. In the case of communities it may be an elected body or a professional forester. In the case of companies it would normally be the chief forester, who is a senior manager. In this case he or she will normally have to secure agreement from the CEO or board before proceeding with an important decision such as seeking certification.

Stakeholders: A whole range of stakeholders from local communities to international NGOs may have views on what constitutes appropriate forest management for the organisation to be certified. The certifier will normally have procedures for consulting these stakeholders on the standards to be used in the certification assessment, and on the perceptions of the overall performance of the forestry operation to be certified.

Wood buyers: Companies which, directly or indirectly, buy wood from the forest organisation may encourage the forest owner or manager to seek certification. There have been a number of examples of this particularly from retailers in the UK.

Government agencies: Governments provide a framework for forest management through policy and legislation. In many countries, governments also own large areas of forests. Thus, governments may be able to encourage or discourage forest managers from seeking certification.

checks the forest management practices and procedures against a set of standards. These standards may be those of the certifier itself, be provided by the forest organisation, or come from the accreditor. The result of this assessment is a certification report, which is normally peer-reviewed. The report will recommend one of the following to the certifier:

1. Unconditional certification;
2. Certification subject to some preconditions;
3. Certification followed by some corrective actions; or
4. No certification.

In the case of 2, the preconditions have to be fulfilled before certification can be granted, whereas in the case of 3, corrective actions can be implemented within an agreed time frame after certification. A certifier may recommend both preconditions and corrective actions.

Step 5. The certifier analyses the certification report and if it is positive (i.e., not option 4) discusses a time frame for implementation of preconditions and/or corrective actions with the forest manager. If this discussion is successful, a certification contract is signed. This contract specifies the rights and responsibilities of both parties in terms of public communication, etc. It also specifies the forest area that has been certified and the length of time for which the certificate is valid.

Step 6. If the forest organisation or its clients desire product labelling, the certifier must complete a chain-of-custody assessment. The purpose of this is to ensure that adequate and reliable mechanisms are in place to track wood from the certified forest through the processing and distribution chain to the final consumer.

Step 7. Periodic repeat visits and checks are made by the certifier.

1.4 COSTS AND BENEFITS OF CERTIFICATION

As certification is a voluntary market instrument it will only be used if the benefits for the forest organisations (and the managers or owners involved) exceed the costs. When this thesis was being completed in 1998, there was insufficient data available to be able to carry out a comprehensive cost-benefit analysis, partly because forest managers or owners generally consider this information to be proprietary. However it is possible to review the categories of costs and benefits involved in certification. It should be noted that two factors have led some authors to cast doubts on the viability of certification as an economic instrument (e.g., Berg and Olszewski 1995; Baharuddin and Simula 1996: 63-70; Brockman *et al.* 1996; Sikod 1996; Wadsworth and Boateng 1996: 6-15; UNECE 1997: 4-5). First, the costs and benefits are still subject to divergent estimates. Second, it is not clear whether certification will actually **promote** improved forest management, or simply **recognise** management which is already exemplary.

1.4.1 Costs

There are three categories of costs:

- 1) the cost of improving forest management to a level which will be adequate for certification;
- 2) the cost of forest management auditing (certification visit and repeat assessments); and
- 3) product certification costs associated with tracking the chain-of-custody.

The first category is likely to be the most significant and the least predictable. It can be subdivided into three components (Bach and Gram 1993):

- 1a. lower yields;
- 1b. increased investment in planning; and
- 1c. different distribution of costs and benefits over time.

Lower yields of timber may result from the need to adjust harvest levels to annual increments

and to set aside forest areas for biodiversity and watershed protection. Certification requires detailed documentation, including management plans. If these are not available, an investment must be made in preparing them. This investment may be partially offset by improved operational efficiency resulting from better planning. Improved forest management may result in the delay harvesting of certain areas while making initial investments in planning. Depending on the interest rate and costs involved this different distribution of costs and benefits over time may become a significant cost component.

There are various estimates of the cost of certification assessments and of product certification. In both cases, there appear to be clear economies of scale which make certification relatively expensive for smaller scale operators. Table 1.2 presents some cost estimates from different countries.

1.4.2 Benefits

The benefits of certification can be divided into two categories: 1) Market benefits; and 2) non-market benefits.

The clearest market benefit is higher prices, but there are few examples of this. Collins Pine, a certified US company, has had some limited success in obtaining a price premium (Hansen and Panches 1998). In 1998, the Swedish company AssiDomän was able to obtain a premium of 5% for certified sawnwood and pulp (see Chapter 6). Even if the first companies to obtain certification can negotiate a price premium because of scarcity value, there is no indication that this will be maintained as more operations receive certification. A number of consumer surveys have been carried out in Europe and North America to try to determine consumers' "willingness to pay" for certified products. These are reviewed in Gale and Burda (1996) and Rametsteiner *et al.* (1998). The surveys generally found that consumers and wood buyers were concerned about the impact of timber harvesting on forests. In several northern European countries there was support for certification as well. However, there is little reliable evidence that consumers would be willing to pay more for certified products.

Table 1.2 Estimates of the Costs of Certification Assessments in Selected Countries

Country	Cost Estimates for Certification Assessments
Brazil	So far certification exercises have cost between US\$20 000 and \$100 000. In large operations the cost has been US\$0.60 and \$1.40 per ha.
Finland	Costs of certification assessments vary widely according to the scale of the operation. For a private holding of 30 ha, costs average US\$24 per ha, whereas auditing a 50 000 ha. Forest Management Association holding would cost an average of US\$0.40 per ha, and a 1.4 million ha regional forestry centre US\$0.02 per ha.
Indonesia	Certification assessments are estimated to cost between US\$0.20 and \$0.40 per cubic metre and chain of custody costs an additional US\$0.30 to \$1.30. (Bringing forest management standards up to the level required for certification could cost as much as US\$13 per cubic metre.)
Malaysia	Annual costs for the initial certification assessment and follow-up visits have been estimated at US\$0.22 per hectare for a 100 000 concession.

Note: costs are not directly comparable between countries as the certification standards are different in each case and the estimates should be considered preliminary.

Sources: Baharuddin and Simula (1997); Simula (1998b).

Other market benefits can include market access and “branding”. In an effort to strengthen the market support for certification and the Forest Stewardship Council (FSC; discussed in Section 1.5.3), WWF and other NGOs have supported the establishment of “buyers’ groups”. By the end of 1997, such groups existed in nine countries and were in preparation in five others (Ford 1997). The groups include a variety of companies, mostly from the retail sector, which have made a commitment to selling certified wood and wood products. The first group to be established was the WWF UK “1995 Group”, which had 75 members covering 30% of the total UK retail market and 15-20% of the wood products market in 1997 (Lawton 1997).

Membership of a buyers’ group involves a commitment to tracing the origin of all wood products sold by the company and phasing in the supply of certified timber (WWF 1996a). Some buyers’ groups involve explicit recognition of the FSC as the only currently credible certification system, although this has been challenged in the UK as anti-competitive, and it is likely that this provision will gradually be dropped (Lawton 1997).

In the Netherlands, a Dutch NGO campaign called “Heart for Wood” was started in 1992 by Friends of the Earth and the development NGO Novib, with the aim of reducing Dutch tropical timber consumption to a level supplied only from sustainable sources (Murphy 1996). It has involved 252 municipalities, 10 government departments, 72 real estate developers, 139 housing associations and the three largest do-it-yourself chains in Holland (Baharuddin and Simula 1997: 23). The campaign was followed by the establishment of a buyers’ group in 1995.

The reasons given by companies for joining buyers’ groups vary, but generally include a wish to avoid negative publicity on environmental issues and a desire to seek competitive advantage in the market by demonstrating environmental commitment (Bendall and Sullivan 1995; Lawton 1997). Tetra Pak UK joined the WWF UK 1995 plus Group because its Swedish suppliers were committed to obtaining FSC certification and its major UK retail clients were already members of the Group. The company also saw the Group as a forum for policy learning about environmental issues (Gunn 1997). Murphy, who has studied the UK buyers’ group and the Dutch “Heart for Wood” campaign, has suggested that international policy processes are no longer the exclusive domain of national governments but involve an increasing number of actors including international NGOs, local governments, transnational corporations, grassroots activists and small businesses. In this context, he argues that buyers’ groups are a manifestation of the emergence of new partnerships between business and NGOs, influenced by the concepts of corporate social responsibility and sustainable development (Murphy 1996: 46).

Some members of buyers' groups have undertaken exhaustive analyses of their wood suppliers to identify potentially problematical sources such as old-growth forests, and in some cases supplies from these areas have been cancelled. A few retailers in the UK and Holland have been able to sell a limited number of product lines made from certified timber, although the demand for certified timber from buyers' groups has exceeded the supply (Knight 1995; Baharuddin and Simula 1996: 42).

Buyers' groups can thus influence market access by providing a growing market for certified products, and a shrinking market for uncertified products. However, the direct impact of the buyers' groups on the market should not be overestimated because of the limited volumes of wood members' purchase. Their indirect impact as trendsetters is probably more important. Several certified forest organisations, including AssiDomän in Sweden, Collins Pine and Seven Islands in the USA (McNulty and Cashwell 1995; Hansen and Panches 1998), have reported that being certified has helped them obtain brand recognition and move towards distinguishing their products from others in what is basically a commodity market.

A number of non-market benefits have been mentioned by certified forest organisations. These include improved staff morale and operational efficiency, minimising the risk of being criticised by NGOs, and organisational image and identity in terms of good forest management (McNulty and Cashwell 1995; Baharuddin and Simula 1997). The process of preparing for, and going through, a forest management audit may help forest managers identify operational improvements in forest management practices, and thus assist in organisational learning.

1.5 TWO APPROACHES TO CERTIFICATION

1.5.1 Systems and Performance Standards

Two types of standards have been used for forest certification, one based on systems and the other on performance. Systems standards define the

characteristics of an Environmental Management System (EMS; Figure 1.2). Certification involves assessing whether the EMS of the forest organisation in question is in place and operating satisfactorily. The International Organization for Standardization (ISO) has played a leading role in the development of systems standards in quality and environmental management.

Performance standards define levels of achievement to be reached by forest operations. Certification in this case involves assessing whether the forest operation meets these levels of achievement in its activities. The FSC has been an important promoter of performance-based certification standards for forest certification. Performance standards can be seen as being composed of various components organised in a hierarchical manner (see Figure 1.1). The difference between the two approaches can be illustrated by an example. If the size of clearcuts is an issue, a performance standard might specify that clearcuts should not be larger than 10 ha. All forest organisations in the area seeking certification would be bound by this limit. A systems standard would state that the forest manager or owner should define the maximum size of acceptable clearcuts for forest operations, respecting any relevant regulations or legislation. Neighbouring operations might have different maximum sizes.

Both management systems and performance standards can be used as a basis for developing certification programmes. In Chapters 4, 5 and 6, three programmes illustrating this are presented and analysed.

Neither ISO nor FSC are certifiers. ISO's role is to promote and coordinate the development of international standards. FSC promotes and coordinates the development of performance based forest certification standards and accredits certifiers. The next two sections discuss the activities of ISO and FSC as they relate to forest certification, up until the end of 1997.

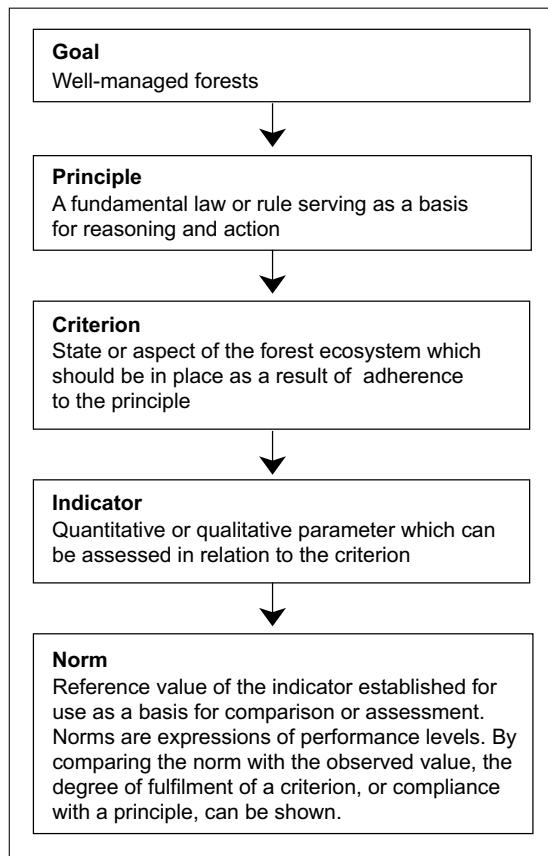
1.5.2 The International Organization for Standardization

The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies, established in 1947. Its

secretariat is located in Geneva, Switzerland. In 1997, it had 120 members in the same number of countries. ISO's objectives are:

to promote the development of standardization and related activities in the world with a view to facilitating international exchanges of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. The results of ISO technical work are published as International Standards (ISO 1997a: 3).

Figure 1.1 A Hierarchical Framework for Forest Certification Standards



Performance standards for forest certification can be seen as being made up of five separate but interlinked components. These are presented below. It should be noted that this is an idealised framework and that existing standards are generally less systematically organised.

Source: adapted from Lammerts van Bueren and Blom (1997)

Most ISO member bodies are governmental institutions, and all have close links with governments in their countries. In addition to governments, ISO seeks to bring together producers, consumers and scientists in technical committees (TC) which prepare standards. By 1997, 10 745 ISO standards in a wide range of fields had been published. International standards may be used as such, or may be implemented through incorporation in national standards. Over 500 organisations have “liaison status” with ISO, including all UN specialised agencies working in relevant fields of activity. These organisations participate in the work of TCs, but do not have the right to vote on the adoption of standards.

TC1 was established in 1947 to standardise screw threads (ISO 1997a: 36) and for three decades most of the standards developed by ISO were performance-based. ISO functioned as a technical organisation with a low public profile. The creation of TC176 on Quality Management and Quality Assurance in 1979, which produced the ISO 9000 series of standards in quality management, led to an increased public profile for ISO. Numerous companies and organisations around the world had their quality management systems certified using these standards (ISO 1997b). The ISO 9000 series of standards are systems-based.

In 1993, after UNCED and at the suggestion of the Business Council for Sustainable Development¹, ISO established TC 207 Environmental Management. TC207's task was to develop the ISO 14000 series of standards in the field of environmental management, tools and systems (ISO 1997a: 157, ISO 1997c: 4).

ISO/TC207 Environmental Management has six subcommittees:

- SC1 Environmental management systems;
- SC2 Environmental auditing and related environmental investigations;

¹ The Business Council for Sustainable Development was a group of senior officials from national and transnational corporations (e.g., Aracruz, Mitsubishi). It was established to promote the role of business in sustainable development (Schmidheiny 1992).

- SC3 Environmental labelling;
- SC4 Environmental performance evaluation;
- SC5 Life-cycle assessment; and
- SC6 Terms and definitions.

1.5.2.1 The International Organization for Standardization and Ecolabelling

Of the ISO/TC207 subcommittees, SC1 and SC3 are the most relevant for Ecolabelling and forest certification. By the end of 1997, SC3 had taken the decision to work on standards for three kinds of ecolabels (ISO 1997d: Annex F):

- Type I: third-party, multiple-issue ecolabels;
- Type II: first-party labels; and
- Type III: environmental report card labels.

In ISO terminology, forest certification leads to a “single-issue” label, rather than a multiple-issue label, because the focus is on the forest management, not on the whole lifecycle of the wood, including processing, transportation, use and disposal. Therefore, forest certification labels

had not been the subject of ISO standardisation activities by the end of 1997 because they do not fall under Type I, II or III labels. However, ISO standard 14020 “Environmental Labels and Declarations – General Principles” is intended to apply to all kinds of ecolabels and thus has potential implications for forest certification programmes (see Box 1.2)

The implications of ISO 14020 for forest certification programmes come both from its general nature as mentioned above, and from the links between ISO and the World Trade Organization (WTO). In addition, the provisions of the standard are broadly compatible with the recommendations of the Intergovernmental Panel on Forests (IPF) concerning forest certification, which are discussed in Chapter 3. It can be seen from Box 1.2 that ISO appears to defer to WTO “provisions” and even “interpretations” concerning trade effects of ecolabels.

Furthermore, in commenting on the draft of ISO 14020, a WTO representative wrote:

Box 1.2 Principles of Environmental Labelling included in ISO 14020 Environmental Labels and Declarations – General Principles

Principle 1. Environmental labels and declarations shall be accurate, verifiable, relevant and non-deceptive.

Principle 2. Procedures and requirements for environmental labels and declarations shall not be prepared, adopted, or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade. (Explanation for guidance in the above principle, the provisions and interpretations of the WTO should be taken into account).

Principle 3. Environmental labels and declarations shall be based on scientific methodology that is sufficiently thorough and comprehensive to support the claim and that produces results that are accurate and reproducible.

Principle 4. The development of environmental labels and declarations should, wherever appropriate, take into consideration the life cycle of the product or service.

Principle 5. Environmental labels and declarations shall not inhibit innovation that maintains or has the potential to improve environmental performance.

Principle 6. Any administrative requirements or information demands related to environmental labels and declarations shall be limited to those necessary to establish conformance with applicable criteria and standards of the labels and declarations.

Principle 7. The process of developing environmental labels and declarations should include an open, participatory consultation with interested parties. Reasonable efforts should be made to achieve consensus through the process.

Principle 8. Information on the environmental aspects of products and services relevant to an environmental label or declaration shall be available to purchasers from the party making the environmental label or declaration.

Principle 9. Information concerning the procedure, methodology and any criteria used to support environmental labels and declarations shall be available and provided on request to all interested parties.

Source: ISO (1997e)

the use of international standards, and most particularly ISO standards can...be regarded confidently as the best way of ensuring that technical regulation and standards do not cause barriers to trade (Eglin 1996).

ISO is involved as an observer in the WTO Technical Barriers to Trade Committee work (ISO 1996e: 11), and ISO's role in standardisation is mentioned in Annexes 1 and 3 of the TBT agreement (Uruguay Round 1994). The WTO is discussed in Chapter 3.

1.5.2.2 Environmental Management Systems and Forest Certification

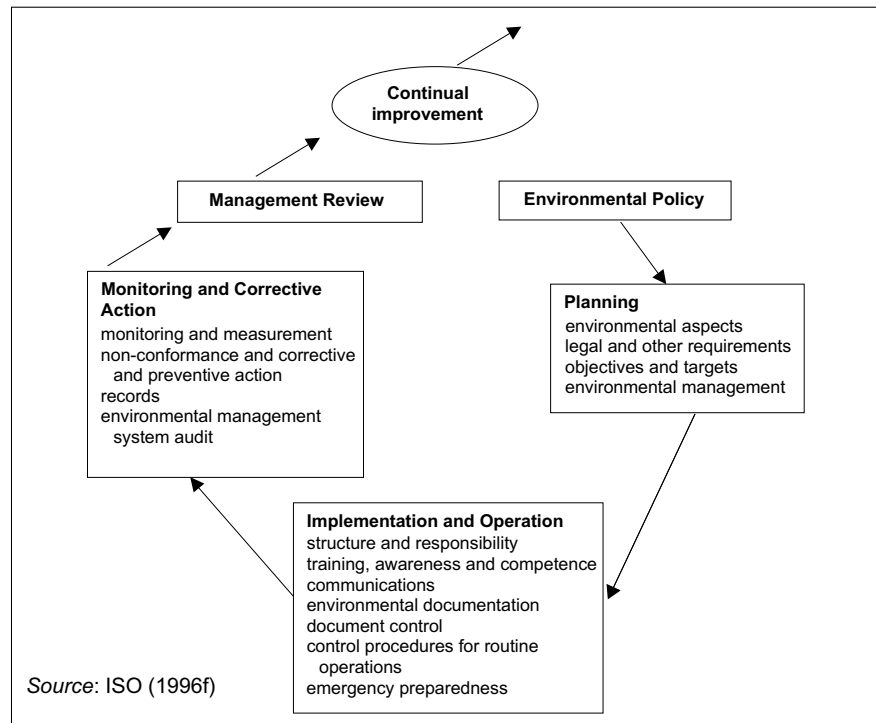
Subcommittee 1 produced two standards on Environmental Management Systems in 1996:

- 1) ISO 14001 Environmental Management Systems – Specification with guidance for use and;
- 2) ISO 14004 Environmental Management System – General guidelines on principles, systems and supporting techniques (ISO 1996a,b).

ISO 14001 is a generic standard that can be used for certification of an organisation's environmental management system (EMS). Figure 1.2 illustrates the components of an EMS. The standard presents the objectives of an EMS as:

It is intended that the implementation of an environmental management system described by the specification will result in improved environmental performance. The specification is based on the concept that the organization will periodically review and evaluate its environmental management system in order to identify opportunities for improvement and their implementation... The environmental management system provides a structured process for the achievement of continual improvement, the rate and extent of which will be determined by the organization in the light of economic and other circumstances... The establishment and operation of an environmental management system will not, in itself, necessarily result in an immediate reduction of an adverse environmental impact. (ISO 1996a: 14)

Figure 1.2 The Environmental Management System Model for ISO 14001



ISO 14001 can be used for third-party certification of an EMS or for first-party claims on the basis of internal conformity assessments. It does not include specific performance criteria beyond a requirement that the organisation's environmental policy includes a commitment to compliance with applicable legislation and regulations, and to continual improvement (ISO 1996a: 6). In general, systems standards are likely to generate benefits in terms of requiring the organisation seeking certification to analyse and describe its procedures. Both this, and the auditing of the management system, may suggest operational improvements. On the other hand, the investment in developing and implementing a management system is considerable and the result may be a certain rigidity in following specified procedures, rather than encouraging innovation.

ISO 14001 was rapidly adopted for forest certification. In 1996, the Brazilian pulp and paper company Bahia Sul had its environmental management system (covering its eucalyptus plantations and pulp and paper plants) certified under ISO 14001 (Cajazeira 1996).² Even before this certification, the Canadian and Australian standards bodies had proposed to TC207 in 1995 that a guide be prepared for the application of ISO 14001 in the forest sector (SCC 1995). One of the factors behind this proposal was the Canadian forest industry's interest in obtaining international recognition for the Canadian Standards Association Sustainable Forest Management standard that was under development at the time.³ This is discussed further in Chapter 5.

The proposal was opposed by Greenpeace and other NGOs at the third TC207 plenary in Oslo in June 1995, on the grounds that certification of an EMS is an insufficient basis for claims of sustainability to be made because of the lack of performance levels in ISO 14001 (IES 1995b: 1). In addition, some NGOs questioned whether there was sufficient stakeholder participation in ISO to allow credible discussions on sustainable forest management (IUCN 1995; WWF 1995). Concerns were also raised by ISO members about the possible proliferation of sector-specific guides undermining the integrity of the generic ISO 14001 standard. The Canadian/Australian proposal was

finally withdrawn after TC207 decided that consideration of sector-specific guides or standards should be deferred until the revision of ISO 14001 (ISO 1995a).

The members of TC207 agreed on an alternative approach, which was to create an "informal study group" of interested members (i.e., not an official ISO group) to review the relationship between ISO standards and sustainable forest management. It was also to make recommendations on how ISO might contribute to the achievement of goals identified in UNCED's Agenda 21 and the Forest Principles (ISO 1995a: Annex K). This study group was convened by Standards New Zealand and met in November 1995 and February 1996. The majority of participants at both meetings came from the forest industry, with Canada, Australia and New Zealand being prominent. A number of national and international NGOs attended the first meeting, but they appear to have become disenchanted with the process, and did not participate in the second meeting (Rae 1995).

The informal study group report was presented to the ISO/TC 207 plenary in Rio de Janeiro in June 1996. The study group recommended that ISO develop a bridging document "to provide guidance for forest organizations in the application of generally accepted criteria for SFM in developing performance objectives and targets as part of their EMS" (ISO 1996c: 1).

A number of European NGOs responded by issuing a statement expressing concern about what they perceived as forest industry attempts to establish a forest management standard under the auspices of ISO, in competition with the FSC.

² By the end of 1997, at least four more forestry companies had been certified under ISO 14001 in Finland, Brazil, Sweden and Indonesia (Baharuddin and Simula 1997: 28).

³ As one Canadian analyst wrote: "If standards developed for sustainable forest management in Canada become the basis for internationally accepted standards, this would not only position Canada as a leader in forest stewardship, but ensure that the Canadian forest products industry is well placed to embrace an ISO standard on SFM" (Abusow 1995).

Three issues were listed in the statement signed by 28 European NGOs:

- 1) ISO 14001 has no specified level of environmental performance;
- 2) ISO 14001 is not designed for use as a labelling scheme, and has no chain-of-custody procedures; and
- 3) ISO is an industry and government-dominated institution lacking broad stakeholder participation (FME 1996).

The informal working group's report was discussed at the ISO/TC207 plenary in Rio de Janeiro in June 1996. After some debate a resolution was adopted creating a formal working group (ISO /TC 207 WG2 Forest Management), convened by Mr Ken Shirley of New Zealand, to prepare a report:

Describing informative reference material for the implementation of ISO14001 and ISO 14004 by forest organizations...the report...must not specify performance levels for forestry and therefore the Report in itself cannot form the basis for performance claims. It must not create a product label (ISO 1996d).

The working group met four times in 1996 and 1997 and produced a report for TC 207 in 1998 (ISO 1998). The working group took the view that private forest owners, governments and corporations:

have a keen interest in implementing the ISO 14001/04 EMS standards as a basis for their environmental management systems. The reasons include a desire to improve environmental management performance and to assist in communicating with consumers and interested parties through the use of a cost-effective framework. They are also seeking consistency with the various intergovernmental and non-governmental sets of SFM principles, criteria and indicators and other

performance indicators as organizations develop their own policies objectives and targets. The consensus of WG2 is that forestry organizations planning to use ISO14001/04 would be assisted by informative reference material containing the range of forest performance measures that are consistent with progress towards SFM (Shirley 1997: 12).

1.5.2.3 The International Organization for Standardization and the International Debate on Forest Certification

Some NGOs have expressed reservations or criticisms about ISO's environmental management standards (e.g., EEB 1995). Several of their arguments have been mentioned above. Two more can be reviewed here. There is a concern that ISO environmental standards may be used by governments as an excuse to relax environmental regulations and legislation (Hauselmann 1996: 9), although there is no clear evidence of this to date. One possible precedent for such a tendency was provided by a court case in Alberta, Canada, in 1996. In this case, the company Prospec Chemical was being sued by the Alberta Environment Ministry over excessive sulphur emissions and was ordered by the court to pay a fine and to seek ISO 14001 certification. It has been suggested that this case may set a precedent for courts (and eventually regulators) to recognise an EMS as evidence of a company's efforts to protect the environment (Consensus 1996).

The second issue is the potential for misleading advertising claims based on ISO 14001 certification. These could include corporate claims of environmental excellence or sustainability, or product labels or claims. ISO has recognised the validity of these concerns and the international secretariat produced an advertising guide (ISO1997a) and has set up a working group to address this issue (ISO/CASCO1997). Meanwhile in 1997, several NGOs including WWF, Greenpeace and Consumers International, established an organisation called the Certification Monitoring Network to monitor certification-based advertising claims and post the results on the Internet.

Several conclusions can be drawn from this overview of the work of ISO. First, that some industry actors have sought to use ISO as a new forum for international forest policy debates. The organisation's technical experience in standardisation, its relationship with WTO and its credibility with the private sector (Abusow 1995; Hauselmann 1996: 2), all give it legitimacy in this role.

Second, that as ISO's standardisation work concerning the environment continues, the organisation will probably become the focus of controversial debates between some industry and NGO representatives. It is not clear that ISO's procedures on consensus decision-making which were designed for less controversial issues, are well adapted to this situation. The ISO definition of consensus is:

General agreement, characterised by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments. Note: consensus need not imply unanimity (ISO/IEC 1991: paragraph 1.7).

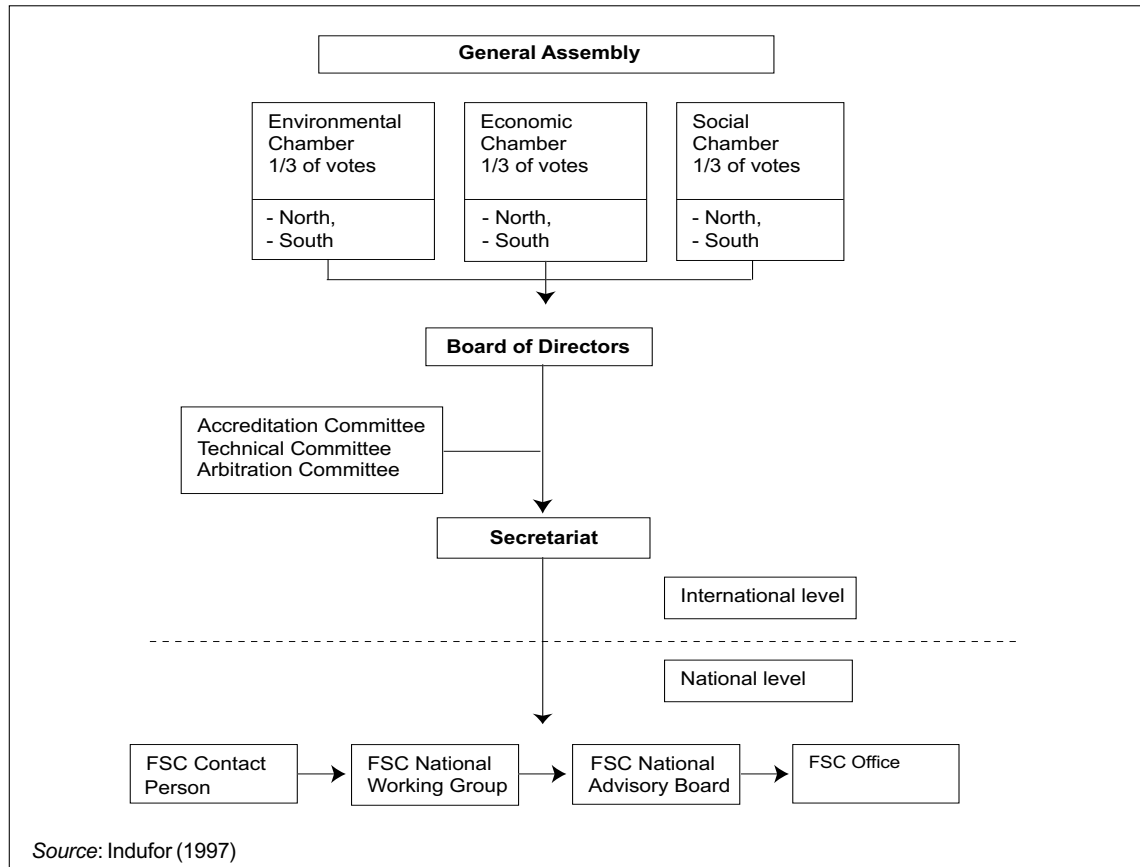
Not surprisingly consensus, thus defined, has sometimes proved elusive in ISO meetings and on several occasions working groups have resorted to votes to come to decisions (Hauselmann 1996: 10-11). Whether this will lead to changes in ISO procedures or a challenge to ISO's credibility is not yet clear. It should be noted that consensus is an important part of international standardisation and Annex 1 of the TBT mentions that standards prepared by the international standardisation community are based on consensus (Uruguay Round 1994: Annex 4).

Rametsteiner and his colleagues concluded a study on potential markets for certified forest products in Europe with the following observation, which is probably valid in North America as well:

The forest industry clearly wants the certification system to be under the governance of the ISO. However, it is doubted whether an ISO management system rather than a performance based system would be acceptable to consumers and environmental organizations and also whether it would be a suitable method for guaranteeing sustainable forest management (Rametsteiner *et al.* 1998).

The debate in TC207 between NGOs, such as WWF and Greenpeace, and representatives of the Canadian, Australian and New Zealand timber industries has often been polemical. An independent observer might understandably come to the conclusion that performance-based forest certification standards and systems-based standards constitute opposing and incompatible approaches. This is not necessarily the case, however, and in May 1996 the Swedish forest products company AssiDomän Skog&Tra stated that it saw the two approaches as compatible.

Environmental Organizations supporting FSC are concerned that the industry might attempt to neutralise uncomfortable environmental demands by presenting ISO as an alternative to FSC. However, the position of the Swedish forest industry is that ISO and FSC are not directly comparable, but rather should complement each other. It should therefore be possible to link generally accepted standards drawn up within the framework of a Swedish FSC process to a certification scheme in accordance with ISO...Standards that are specific to the forest industry could then be used for general certification. This would, in turn, generate the necessary acceptance and support of environmental and social stakeholders, while at the same time, enabling us to give the system a stable platform and international consistency that our industry needs. (Johansson 1996: 25)

Figure 1.3 The Structure of the Forest Stewardship Council

This “twin approach” has subsequently gained the support of most actors in Sweden, as discussed in Chapter 5, and will probably end up being widely applied elsewhere, although not always with FSC performance-based standards.

1.5.3 The Forest Stewardship Council

The Forest Stewardship Council (FSC) is a non-governmental association of individuals and organisations established in 1993. In September 1997 it had 200 members from 37 countries (FSC 1997a). Its secretariat is located in Oaxaca, Mexico. FSC’s objectives are to:

Promote environmentally appropriate, socially beneficial and economically viable management of the world’s forests... through a voluntary accreditation programme for certifiers of forest

management. The FSC shall evaluate and accredit certifiers based upon adherence to FSC Principles and adherence to FSC Guidelines for Certifiers (FSC 1994a: paragraphs 1 and 5).

The organisation’s main sources of funding have been the Austrian, Dutch and Mexican governments, the European Commission, the Ford, Wallace Global and MacArthur Foundations and WWF Netherlands (FSC 1995). FSC is governed by a general assembly of members, which is divided into three chambers (Figure 1.3), each with one-third of the voting power.⁴ This assembly

⁴ The original structure adopted in 1993 involved only two chambers: 1) social and environmental interests with 75% of votes; and 2) economic interests with 25% of votes. This was modified in June 1996 (FSC 1996b: 7).

elects the board of directors (which has a total of nine members) and may approve modifications to the FSC Principles and Criteria and statutes. The chamber structure is intended to ensure a balance of social, economic and environmental interests in decision-making, irrespective of the number of members. Within each chamber, voting power is divided equally between developed (“northern”) and developing (“southern”) country members. FSC has no governmental members. Annexes 1.1 and 1.2 show the breakdown of FSC membership.

In 1994, FSC members approved a set of Principles and Criteria (P&C) for forest management (FSC 1994b). These are intended to serve as the basis for the development of national or regional certification standards through multistakeholder consultative processes in national FSC working groups. In the absence of these national or regional standards, FSC-accredited certifiers have been authorised to certify using the FSC P&C. In the FSC system, unlike ISO 14001, there is provision for certification of chain-of-custody between the certified forest and the customer, and thus for product labelling.

A draft FSC accreditation manual covering both forest management and chain-of-custody certification was issued in 1995 (FSC 1995), and used to accredit four certifiers for certification in natural forests in August 1995 (Cabarle 1996). These were the SmartWood Program of the Rainforest Alliance, the Forest Conservation Program of Scientific Certification Systems, SGS-Forestry’s Qualifor Programme and the Soil Association’s Responsible Forestry Programme.⁵ The Dutch certifier SKAL was accredited in January 1997, bringing the number of FSC-accredited certifiers to five by the end of 1997 (FSC 1997b). By the end of 1996, seven additional certifiers were seeking FSC accreditation (FSC 1996d).

The FSC-accredited certifiers had certified 3.1⁶ million ha of forests in 17 countries by September 1997 on the basis of certifiers’ standards and the FSC P&C (FSC 1997b). FSC has promoted the development of national and regional standards through national working groups. By the end of 1997, no national standard had been formally approved by the FSC, although

a Swedish standard had been submitted to the FSC board for consideration, and was subsequently approved in January 1998. However, standards were at various stages of development under the coordination of FSC “contact persons” in Belgium, Bolivia, Canada, Denmark, Finland, Ireland, Mexico, the Netherlands, Papua New Guinea, Sweden, Switzerland, the UK and the USA (FSC 1997c). In the USA and Canada a total of 11 regional working groups were involved in developing standards under FSC auspices (Ervin and Pierce 1996: 9). Discussions on standards development were also occurring in several other countries pending the nomination of FSC “contact persons” (Aryal 1997). In 1996 FSC registered its accreditation logo as a trademark and this began to appear on certified products in the market in limited quantities (FSC 1996c).

1.5.3.1 The Forest Stewardship Council and the International Debate on Forest Certification

Over the period 1993 to 1997, FSC and its members played an important role in international forest certification. Most of the forests certified by the end of 1997 had been assessed by certifiers that had either been accredited by FSC or had applied for certification.

However, FSC’s main contribution was to provide a focus and forum for policy discussions and promotion of certification. Without FSC, certification would probably still be a concept that had been tested in a few cases, rather than a reality. FSC’s visibility in the international arena has been attributed to four factors: the lack of viable alternatives; strong NGO support; availability of external funding and the quality; and commitment of the FSC secretariat staff (Baharuddin and Simula 1997: 15). To FSC’s direct impact can be added the indirect impact of stimulating other competing initiatives on certification in fora such as ISO.

⁵ SCS, SGS and the Soil Association were subsequently granted accreditation to cover plantation certification.

⁶ As mentioned in the Introduction, by June 1998 this had reached 10 million ha in 25 countries.

Partly because of its leadership position, by the end of 1997 FSC had already been criticised on several counts by different actors. First, the original structure of the general assembly which placed economic interests in a minority position (their chamber only had 25% of the votes in the assembly) led to some criticism of FSC for being “anti-industry”. The modification of the structure in June 1996 was intended to address this concern.

A related concern is the question of the representativeness of FSC membership. Based on January 1996 data, Simula (1996) noted that the FSC membership came from only 25 countries and Africa and Asia were poorly represented. He also observed that the membership of the economic chamber did not represent the nature and extent of the economic interests involved in forestry. The situation had changed somewhat by September 1997, with members coming from a total of 37 countries (FSC 1997a) and doubling between January 1996 and September 1997 (Annexes 1.1 and 1.2). The number of members in the economic chamber, which had been identified as inadequate to ensure proper representation (Simula 1996: 182), increased from 44 to 83, although because of the overall increase in membership this represented a slight decline in the percentage of economic members. There was little change in the categories of members within the chamber (Annex 1.2), although several large primary producers joined, whereas this category had previously not been represented in the membership. Analysis of the information suggests that the under-representation of social interests may be a more severe problem for FSC, particularly in developing countries. Africa and Asia are also poorly represented in the membership.

Second, FSC’s relationship with governments has been the subject of criticism in two respects: governments are excluded from the membership; and certification is perceived by some actors as an unnecessary and/or unwelcome addition to governmental control over forest management. It will not be easy for FSC to respond to the satisfaction of its critics on the first point, because allowing government membership would probably cause a strong negative reaction from existing NGO members. However, some

government observers were invited to attend the 1996 general assembly and government officials have been involved in FSC working group discussions in some countries. The second point is equally difficult in some countries such as the UK and Belgium (e.g., Silva Belgica 1994: 3; Maitland 1995; TTJ 1996). The UK Forestry Commission has suggested a number of options for FSC certification including FSC recognition of certification by the UK Forestry Authority (Bills 1997), but no agreement had been reached with the FSC on this matter by the end of 1997. It has been pointed out that FSC’s lack of links with government could become an important issue if certification is dealt with by WTO. In addition, in developing countries, government may have a key role to play in facilitating the establishment of certification programmes because of the limited capacity of NGOs and even industry (Simula 1996: 182).

Third, FSC certification has been seen by representatives of small-scale forest owners in some European countries as discriminatory. They consider that the FSC P&C were written with the conditions of large-scale tropical forestry in mind, or simply that due to economies of scale it will be much easier for large-scale forestry operations to be certified than small-scale concerns (e.g., Lillandt 1997, Södra 1997b). FSC has provisions for accredited certifiers to develop “group certification” to address the needs of small-scale forest operations which may eventually alleviate some of these problems, although this is uncertain. An analysis of FSC’s September 1997 list of certified operations shows that only approximately 4% of the area was in small-scale or community operations (FSC 1997b). This suggests that FSC’s provisions for ensuring access to certification independent of the size of the forestry operation may not yet be having the desired effects, and may require revision.

Fourth, a related issue is the complexity and cost that can be associated with maintaining the chain-of-custody from a certified forest to the consumer. The complexity increases for the case of pulp and paper where the raw material may come from many different forests, and separating certified from uncertified wood during processing

may be impractical. It has been argued that establishing a chain-of-custody for paper products is impractical (Rotherham 1997). An alternative view is that this would only be practical for large integrated operations, leading again to concerns that FSC is biased against smaller forest owners (Södra 1997b). FSC has tried to address this issue in part, by adopting a “percentage-based claims” policy which allows the FSC logo to be used on pulp and paper or assembled wood products if at least 70% of the raw material comes from certified forests (FSC 1997e).

Fifth, certification on the basis of the FSC P&C and certifiers’ standards has led to a number of criticisms of both FSC and the certifiers on a variety of counts from lack of transparency to technical incompetence (e.g., Centeno 1996). In this case, some of the strongest criticisms have come from NGO members of FSC. In 1996, SGS’ certification of two forest areas for the French firm Isoroy in Gabon led to a formal complaint against SGS by several NGOs (FSC 1997e). It can be expected that certification on the basis of the FSC P&C will be subject to increasing scrutiny and criticism. The Isoroy case also suggested that some of the NGO members of FSC have strong reservations about certification in natural tropical forests, which may lead to controversial debates within FSC. Concerns have also been expressed that once a FSC certificate is issued there are extensive processes for stakeholder appeals, which can be very time consuming and potentially embarrassing for the forest managers involved.

Sixth, as national and regional standards are developed the issue of their harmonisation will arise, particularly in the case of neighbouring countries. The prospect of less demanding FSC standards in Finland than in Sweden was listed as a key reason for Swedish forest owners to leave the Swedish FSC working group, and FSC’s capacity to ensure harmonisation and compatibility has been questioned (Södra 1997b). This is likely to be a major issue for FSC in the coming years as its procedures for harmonisation of national standards are currently rudimentary.

Seventh, a criticism of forest certification in general (and perhaps implicitly of FSC in particular because of its leadership position) is that

being “single-issue”, it focuses attention on forest management problems, making wood appear less “environmentally friendly” than competing products such as aluminium and PVC (Lillandt 1997). One response to this concern has been the adoption of draft FSC Swedish standards as part of the criteria for the Swedish Bra Miljöval paper ecolabel, which is a Type I ecolabel based on Life Cycle Analysis (SSNC 1997).

In conclusion, by the end of 1997 FSC had been subjected to criticism on a variety of issues from both outside and inside the organisation. Some of these issues are largely technical and may be resolved by modification and further development of FSC’s policies and procedures, and integration of systems and performance-based certification as suggested by AssiDomän (Johnsson 1996). However other issues (such as the proper role of governments and NGOs in certification) reflect differences between the belief systems of actors and may be the subject of prolonged conflicts. These questions are examined in detail in the case studies.

1.5.4 Other Forest Certification Initiatives

At the end of 1997, a number of other forest certification programmes were under development in addition to the FSC and ISO systems. These programmes have been described in detail in three reports prepared for ITTO (Baharuddin and Simula 1994, 1996, 1997). This section provides a brief overview of the situation, drawing largely on the information provided in these reports.

At the regional level the African Timber Organization has developed a set of criteria and indicators for sustainable forest management and is considering their application to certification through a “Green Label Scheme”. The Nordic Certification Project is a forum for coordination and harmonisation of the development of certification standards in Norway, Sweden and Finland, but has not led to the development of a certification scheme. The European Commission has considered several options for EU certification schemes as discussed in Chapter 3. None of these regional initiatives has led to the development of a certification system.

At the national level, by the end of 1997 certification standards were under development in about 20 countries. This number includes both FSC working groups and other government or private sector-led initiatives. Only Canada had a fully operational national certification system. The development of the Canadian system is analysed in the Canadian case study in Chapter 5. Certification systems had also been developed in Indonesia and Brazil. Both were being tested and were close to reaching fully operational status. The Indonesian certification system is discussed in Chapter 4. Certification standards also existed in Finland, although there several NGOs have expressed reservations about them (Baharuddin and Simula 1997: 39). FSC draft standards existed in Sweden, but in this case the forest owners had withdrawn their support from the process. Finally, the Dutch government has developed a set of “minimum requirements” for the labelling of timber as coming from sustainably managed forests. Most of the national-level certification schemes developed with government involvement make reference to international C&I documents in their standards.

It should be noted that “country of origin” labelling schemes existed in Austria, Germany and the UK, and several first-party timber labelling schemes were also in operation. Neither of these types falls under the definition of certification used in this thesis.

1.6 CRITERIA FOR ASSESSING FOREST CERTIFICATION PROGRAMMES

The literature on implementation suggests that an evaluation of forest certification must take into account the elements of effectiveness, efficiency and impact, and well as secondary effects (Grindle 1980; Hogwood and Gunn 1984; Casley and Kumar 1988). **Effectiveness** is a measure of performance of an instrument or programme in relation to objectives, **efficiency** is the rate and cost at which inputs result in outputs, **impact** is the broader social, economic, political and environmental consequences of a

programme and **secondary effects** are unintended side-effects. As mentioned in the introduction, it is too early to carry out a formal evaluation of the impacts of certification because programme implementation is only just beginning, and discussion of the other elements must also remain preliminary at this stage.

However, a set of criteria for assessing certification programmes can be drawn from the literature in light of the objectives presented in Section 1.1 (e.g., Baharuddin and Simula 1994; GII 1996; UNESCO 1997a). These criteria are:

- credible to consumers;
- comprehensive to include all types of timber and timber products;
- objective and measurable;
- reliable in assessment results;
- independence from parties with vested interests;
- voluntary in participation;
- equal treatment, non-discriminatory in trade impact;
- acceptable to the involved parties;
- institutionally adapted to the local conditions;
- cost-effective;
- transparent to allow external judgement;
- goal-orientated and effective in reaching objectives;
- practical and operational; and
- applicable to all scales of operation.

These criteria are used in the three case studies of this thesis for preliminary evaluations of the certification programmes in the countries concerned. It should be noted that in the absence of adequate data, these evaluations must be considered to be both indicative and somewhat subjective.

In the preliminary evaluations, “credibility to consumers” was not assessed directly through a survey. It was assumed that this credibility is likely to be based on three factors: 1) the existence of a product label that allows consumers to identify a certified product; 2) NGO support; and 3) the inclusion of performance standards in the certification programme. The last point is based

on a survey of potential markets for certified timber in Europe, which concluded that:

It is doubted whether an ISO management process system rather than a performance based system would be acceptable to consumers and environmental organizations and also whether it would be a suitable method for guaranteeing sustainable forest management (Rametsteiner *et al.* 1998).

In reviewing certification programmes, it is assumed that certification is not a “stand alone” policy instrument, but rather should be seen as one of the several tools available to promote improved forest management and market access. This means that the policy context is important, and the Advocacy Coalition Framework (ACF) presented in the next chapter provides a framework to describe and analyse this context.

Chapter 2

Theoretical Framework and Research Approach

When research for this thesis began in mid-1994, forest certification was just beginning: only four certification systems were operational, two run by NGOs and two by for-profit organisations. There were no national certification programmes. In 1993, it was estimated that about 1.5 million cubic metres of timber was produced annually from certified forests, the largest of which were the government teak plantations in Java, which had been certified in 1990 (Baharuddin and Simula 1994: viii). Under these circumstances, it was not possible to evaluate the impacts of certification in terms of improved forest management or market benefits for producers. Accordingly, a policy analysis approach was taken and it was decided that the goal of this thesis would be to understand which actors were supporting or opposing forest certification and why, and how certification may contribute towards the improvement of forest management practices.

The objective of policy analysis is the solution of practical problems, and analysts generally view policies as hypotheses which should be examined and tested (Landau 1977). In forest policy analysis, several approaches have been used in the past. These include historical, comparative and institutional studies, which tended to focus on the central role of the state (Cubbage *et al.* 1993). More recently, there has been a tendency to use actor-based models to study policy processes. This trend has been explained by Glück (1997: 5) as:

This old paradigm of policy planning suffers from the assumed hierarchical relationship between state and society... However, in pluralistic democracies,

instead of a uniform decision maker, there are a multitude of political actors with varying empowerment, interests and objectives...The new paradigm of policy planning focuses on governance processes which take place in policy networks or bargaining systems. “Networks” are informal groups of interacting political actors of the policy-making process. State and society are not hierarchically separated but interacting.

This “new paradigm” of policy networks of actors mentioned by Glück is used in this thesis. It is particularly relevant is the case of forest certification where NGO⁷ and private sector actors have taken a leading role in programme and policy development rather than the state (Biggs and Neame 1994, Willets 1996, Bass and Hearne 1997).

The focus on the **process** of policy development and implementation is also relevant. In their discussion on “epistemic communities”, a particular type of policy network discussed below, Adler and Haas (1992) note that it is useful to understand this process in terms of policy learning. They argue that the policy process can be seen in part as a question of who learns what, when, to whose benefit and why? Seeing the policy process as concerned with learning and the use of knowledge is consistent with actor-based models (Richardson 1996). It is also consistent with the fact

⁷ The term NGO comes from the charter of the United Nations and applies to non-governmental organisations which have a legally established structure, do not advocate the use of violence, are not political parties, are not profit making and are not established by governments (Willets 1996).

that many current policy issues, such as forest certification, are surrounded with uncertainty. Under these circumstances traditional power-based explanations are insufficient. As Hecl (1978: 102), one of the founders of the network approach argued:

Obviously questions of power are still important. But for a host of policy initiatives undertaken in the last twenty years it is all but impossible to identify clearly who the dominant actors are...looking at the few who are powerful, we tend to overlook the many whose webs of influence provoke and guide the exercise of power. These webs, or what I will call "issue networks", are particularly relevant to the highly intricate and confusing welfare policies that have been undertaken in recent years.

However, the multiplication of actors, issues and uncertainty could make policy processes appear random, which they are not (Richardson 1996). One of the reasons they are not is that actors can be organised into coalitions composed of individuals from a variety of organisations who share beliefs and act in concert. Sabatier (1988) developed the Advocacy Coalition Framework (ACF) of policy change partly in response to the apparent complexity and uncertainty in environmental policy subsystems in the USA. The ACF is consistent with actor-based policy network approaches for studying policy processes, which are relevant for understanding forest certification. It provides the basic theoretical reference point for this thesis, and is presented in the following section.

2.1 THE ADVOCACY COALITION FRAMEWORK

2.1.1 The "Textbook" Model of the Policy Process

The standard, or "textbook" (Nakamura 1987), model of the policy process used in policy analysis is largely derived from the work of Laswell (1956) on decision processes, and of Easton (1965) on the "systems model" of politics. It was developed as an alternative to the institutional approach,

based on Weber (1947) who focussed on the functioning and external relations of individual government agencies. As the range, interconnectedness and complexity of government activity increased, researchers began to find government agencies to be unmanageable units for study and began to focus on individual programmes (Brewer and de Leon 1983).

Policy analysis often concentrates on the development and implementation of individual policies or programmes. Laswell's contribution was to separate what he called the "decision process" for these policies or programmes into a series of stages: intelligence, recommendation, prescription, invocation, application, appraisal and termination. His rather abstract model was further developed, and adapted to the study of individual programmes by various researchers, including Jones (1977) who divided the policy process into the following steps: problem identification, programme development, programme implementation, programme evaluation and programme termination. This model sees the policy process as series of sequential, cumulative steps, which are differentiated by function (Nakamura 1987). The main actors are members of elites motivated by objective rationality, such as elected and appointed officials, policy analysts and researchers (Knocke 1990: 22).

The stages model of the policy process was widely used in the 1970s and 1980s, particularly in the USA. The model has a number of advantages over the institutional approach in that it allows analysis of processes that transcend individual institutions, focuses on policy impacts rather than on authoritative decisions, and allows separation of complex policy processes into manageable components (Jenkins-Smith and Sabatier 1993a: 2).

However, by the mid-1980s a number of criticisms had been raised about the original version of the "textbook model". One early critic was Dror (1967) who argued that more attention should be paid to the political aspects of public decision-making. Weiss (1982) noted that the "textbook model" excludes policies that are produced by informal negotiation and improvisation. Kingdon (1984) challenged the assumption that the policy process is dominated by rational actors and argued

that streams of problems, solutions, participants and choice opportunities run concurrently through institutions:

events do not proceed neatly in stages... instead, independent streams flow through the system all at once...participants do not first identify problems and then seek solutions for them...advocacy of solutions often precedes the highlighting of problems to which they become attached (Kingdon 1984: 215).

Nakamura (1987) questioned the stability of the policy-making environment assumed by the model. He added that in practice few policies meet the implicit criterion of clear and consistent policy objectives, and that in consequence once policies are adopted, conflicts over meaning are frequent during implementation.

In developing the Advocacy Coalition Framework (ACF) Jenkins-Smith and Sabatier (1993a) formulated a number of criticisms of the “textbook model” as follows. First, the model is not a causal model because it lacks identifiable forces to drive the process from one stage to another. This means that there is no clear basis for empirical hypotheses testing. Second, the descriptive accuracy of the sequence of stages is questionable because of numerous deviations in reality from the model. Third, the “textbook model” overemphasises the role of legislators and tends to neglect other actors in government and society. Fourth, there is often a multitude of overlapping cycles involving different levels of government, rather than one cycle. In view of these criticisms, Jenkins-Smith and Sabatier developed the Advocacy Coalition Framework model of the policy process, which is presented in this chapter (see Figure 2.1).

While all these criticisms are valid, there is also an element of exaggeration in them in that the “textbook model” is now mostly used in forest policy research as an organising framework for information, rather than a causal model (e.g., Cubbage *et al.* 1993; Glück 1995; Tikkanen and Solberg 1995). This approach will be followed in this thesis.

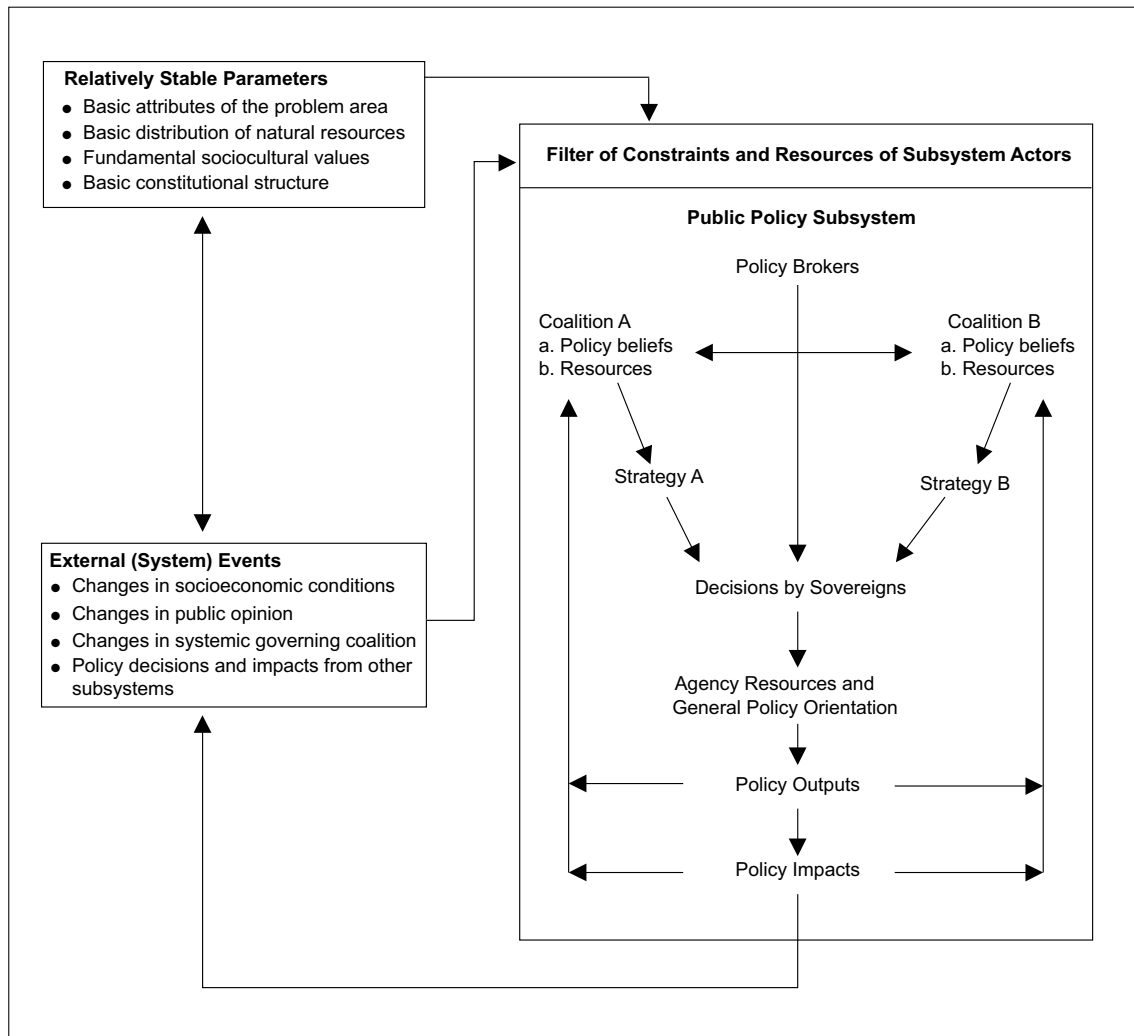
2.1.2 Overview of the Advocacy Coalition Framework

The ACF has four basic premises.

- 1) In order to understand policy change, a perspective of a decade or more is required. The model sees policy-oriented learning as one factor causing policy change and the evidence from the literature is that this is a slow, cumulative process (e.g., Weiss 1977). In addition, research on policy implementation also suggests the need to view success or failure of programmes over a long time period (e.g., Hogwood and Peters 1983).
- 2) Over decades, the optimal unit of analysis is the “policy subsystem”, rather than individual government institutions. This approach draws on structural analysis (e.g., Hecló 1978) and the concept of subsystems is essentially synonymous with that of policy domains (Knocke 1990). This is discussed further in Section 2.2.
- 3) Policy subsystems will normally involve actors from a variety of levels of government, not just national-level actors. This is not only because states in federal systems (such as the US) have considerable legislative autonomy, but also because implementation research has shown that local officials have latitude in deciding how federal policies are implemented “on the ground” (e.g., Pressmann and Wildavsky 1973).
- 4) Belief systems are central. Advocacy coalitions are seen as being made up of actors sharing belief systems. Public policies and programmes can be conceptualised in a similar way and thus incorporate implicit theories on how to achieve their objectives.

The ACF retains some of the components of Easton’s “systems model” (1965): a system involving input, output and throughput operating within a broader environment. Another key influence was Hecló’s (1974) study of the evolution of welfare policy the UK and Sweden, with its emphasis on policy learning and policy elites.

Figure 2.1 The Advocacy Coalition Framework



In the ACF, policy change is viewed as a result of processes within the subsystem in question influenced by relatively stable parameters and external system events (Jenkins-Smith and Sabatier 1993a: 5)

At the level of individual *policy subsystems*, advocacy coalitions interact and seek to influence the decisions of government institutions. Subsystems are made up of a variety of actors from public and private organisations that are actively concerned with a particular issue such as air pollution or energy policy. Coalitions consist of actors in a subsystem who share basic policy beliefs and who collaborate over time.

Within subsystems, policy-oriented learning occurs. This involves enduring alterations of thought or behavioural intentions resulting from experience (Hecl 1974: 306). Coalitions will attempt to “out-learn” each other and to use various strategies to seek to have their belief systems translated into public policies. The existence of professional fora for policy debate is thought to facilitate this. However, the ACF assumes that although policy-oriented learning can contribute to policy change, major shifts in the distribution of political resources leading to modification of the core aspects of a governmental policy or

programme are usually the result of perturbations external to the subsystem. The result of policy change is one or more changed or new governmental programmes that produce outputs and impacts at the operational level. The concept of steps in the policy process is not completely abandoned, but only two are explicitly recognised: formulation and implementation. Sabatier (1986: 25) has argued strongly against losing the distinction between these two stages:

...obliterating the distinction between formulation and implementation will have two very significant costs. First it makes it very difficult to distinguish the relative influence of elected officials and civil servants—thus precluding an analysis of democratic accountability and bureaucratic discretion, hardly trivial topics. Second, the view of the policy process as a seamless web of flows without decision points, precludes policy evaluation (because there is no policy to evaluate).

Following this reasoning the ACF framework is used in conjunction with the stages of the policy process in this thesis.

The delimitation of system boundaries is rather empirical and the ACF has little to say on the origins of subsystems or coalitions. It is however assumed that advocacy coalitions are bound together by a system of shared beliefs. In the ACF model it is considered that advocacy coalitions constitute the best way to aggregate actors and are superior to the alternative of considering formal institutions as dominant actors, or to considering actors individually which would be unmanageable.

It should be noted that not all actors would necessarily be active or belong to a coalition. Some actors will be present, but inactive; they are referred to as “latent”. Others may be “policy brokers” whose role is to keep conflicts within acceptable limits and help reach reasonable solutions.

Advocacy coalitions seek to translate their beliefs into policy by using various strategies and instruments such as litigation, lobbying elected

officials, commissioning research, influencing public opinion, etc. The structure of the belief systems of actors is illustrated in Table 2.1. It is assumed that belief systems are hierarchical, meaning that abstract (core) beliefs are more resistant to change than specific (secondary) ones. Governmental programmes can also be seen as being made up of policy cores and secondary aspects.

The concept of belief systems draws on three sources. First, the theory of “reasoned action” (Ajzen and Fishbein 1980), a model in which actors are seen as evaluating alternative courses of action in pursuit of their goals. It is assumed that in doing this, actors consider the preferences of reference groups (e.g., members of an advocacy coalition) more than in strictly utilitarian models. Second, rationality is bounded, following March and Olsen (1976). Thus emphasis is placed on the cognitive limits to rationality, limited searches and “satisficing”. Third, it is assumed that actors are policy elites with complex, coherent belief systems (Cobb 1973). The idea of belief systems was preferred to the concept of economic and organisational interests on the basis that it is easier to determine actors’ beliefs than their interests. In addition Sabatier (1993: 28) argues that:

Interest models must still identify a set of means and performance indicators necessary for goal achievement; this set of interests and goals, perceived causal relationships and perceived parameter states constitutes a “belief system”. While belief systems can thus incorporate self-interest and organizational interests, they also allow actors to establish goals in quite different ways (e.g., as a result of socialisation) and are therefore more inclusive.

Outside the policy subsystem in question, the ACF distinguishes between stable and dynamic external factors. The combination of the two provides a set of constraints and resources which affects subsystem actors.

Relatively stable parameters are usually external but may also be internal to the subsystem. Their stability means that actors rarely make them the object of strategising behaviour. These are:

Table 2.1 Structure of the Belief Systems of Actors in the Advocacy Coalition Framework

	Deep Core	Policy Core	Secondary Aspects
Defining Elements	Fundamental normative and ontological axioms	Fundamental policy positions concerning the basic strategies for achieving core values within the subsystem	Instrumental decisions and informational searches necessary to implement policy core
Scope	Across all policy subsystems	Specific to subsystem	Specific to subsystem
Susceptibility to Change	Very difficult; akin to a religions conversion	Difficult, but can occur if experience reveals serious anomalies	Moderately easy; this is the topic of most administrative and even legislative policy-making
Illustrative Components	<ol style="list-style-type: none"> The nature of man: <ol style="list-style-type: none"> inherently evil vs. socially redeemable part of nature vs. dominion over nature Relative priority of various ultimate values: freedom, security, power, knowledge, health, love, beauty, etc. Basic criteria of redistributive justice: whose welfare counts? Relative weights of self, primary groups, all people, future generations, no humans, etc. 	<ol style="list-style-type: none"> Proper scope of governmental vs. market activity Proper distribution of authority among various levels of government Identification of social groups whose welfare is most critical Orientation on substantial policy conflicts, e.g., environmental protection vs. economic development Magnitude of perceived threat to those values Basic choices concerning policy instruments, e.g., coercion vs. inducements Desirability of participation by various elements of society, e.g., public vs. elite Ability of society to solve problems in this policy area 	<ol style="list-style-type: none"> Most decisions concerning administrative rules, budgetary allocations, disposition of cases, statutory interpretation and even statutory revision Information concerning programme performance, seriousness of the problem, etc.

Source: adapted from Sabatier and Jenkins-Smith (1993: 221)

- The *basic attributes of the problem area or “good”*, include aspects such as “excludability” and susceptibility to quantitative measurement. For example, public goods such as air or ocean fisheries can give rise to common property problems which markets cannot deal with efficiently, leading to the need for government intervention (Ostrom 1990). In principle, policy learning should be easier on issues where quantitative measurement is feasible than on issues where quantitative data is lacking, or hard to obtain.
- The *basic distribution of natural resources* (e.g., presence or absence of oil and gas deposits in a country) affects a society’s wealth and economic structure.
- *Fundamental cultural values and social structure* (or polity) are relatively stable in most countries as significant changes in the relative power of different social groups usually takes decades to occur.
- Finally, the *basic legal structure* (i.e., the constitution and legal norms such as the role of the courts) tends to be stable over decades, if not longer, in most countries.

Dynamic system events are susceptible to major fluctuations over the course of a few years and are seen in the ACF as providing the major stimulus for policy change. The model divides them into four categories:

- Changes in *socioeconomic conditions and technology* can either undermine the causal assumptions of present policies or significantly alter the level of political support for specific advocacy coalitions. An example of the latter, given by Sabatier (1993: 22), is the rise in public concern in the USA in the 1960s about environmental degradation favouring the passage of the 1970 Clear Air Amendments.
- Complete changes in *systemic governing coalitions* normally require that the same coalition control the chief executive's office and both houses of the legislature. This is rare in the USA (but more common in other parliamentary systems such as the UK). Partial changes in governing coalitions are more common but are seen as producing lesser effects. In some cases high-level political appointees (e.g., Ministers) can have an effect on subsystems.
- *Policy decisions and impacts from other subsystems* are seen as important dynamic events because subsystems are interrelated. One example given by Sabatier (1993: 23) is the impact on virtually all policy subsystems of the UK joining the EU.
- Finally, the ACF sees changes in *public opinion* as being important in some cases. The authors of the ACF consider that the general public has neither the expertise nor inclination to be active participants in a policy subsystem, leaving this role for policy elites. However public opinion can affect subsystem actors, for example, the US public's relatively strong support for environmental protection or divided, stable opinions on abortion (Sabatier and Jenkins-Smith 1993: 223).

The ACF was originally formulated in 1988 (Sabatier 1988). It was then tested through a number of case studies in North America, several of which

related to environmental conflicts. In general, this exercise confirmed the usefulness of the framework, but it also suggested some modifications. This testing was facilitated by the fact that the framework was accompanied by a number of falsifiable hypotheses covering its main elements. The revised version used here was published in 1993, together with reports of the case studies (Sabatier and Jenkins-Smith 1993). The hypotheses were also revised (see Annex 2.1).

In summary, the ACF represents a different approach to the policy process than the "textbook model", although it draws on some of the same sources. In terms of the three classical sociological paradigms (class, managerial and pluralist) described by Alford and Friedland (1985: 25), the ACF is clearly located within the managerial-elite perspective, which sees policy in modern industrial societies as dominated by formal organisations that compete over the collective allocation of scarce resources.

The ACF is less clearly situated in terms of the division between the normative conformity/objective rationality paradigms (Knocke 1990: 19-27), as it draws on both. The emphasis on actors' belief systems draws on norms as explanatory concepts. Actors are assumed to act rationally, but in the bounded rationality described by March and Olsen (1976) rather than the rigorous utility-maximising rationality of Becker (1976).

Sabatier (1993: 36-8) notes that the ACF differs from other theories of the policy process. The ACF rejects Lowi's (1972) model because it assumes that policy processes differ significantly according to whether the objective is distributive, regulatory or redistributive. Sabatier concedes that such differences may exist but questions their significance. Similarly, the ACF takes a different approach to the statist theory of Skocpol (1979), which postulates the existence of a relatively unified, autonomous state. On the other hand, the ACF is compatible with the approach of statist scholars who recognise variations in state strength and weakness in different sectors at the "meso" level. Sectoral analysis at this level has been carried out using the concept of policy networks (e.g., Atkinson and Coleman 1989) and this is compatible with the ACF. Policy networks are discussed in Section 2.2 below.

On the other hand, the ACF draws on institutional rational choice to some degree (Ostrom 1990) in that its authors agree that institutional rules affect individual behaviour. However, it goes beyond them in viewing these rules as the result of strategies and activities of advocacy coalitions over time. It also places greater emphasis on socioeconomic factors than most proponents of rational choice.

It also draws on pluralism (Truman 1951) in stressing the importance of competition between interest groups, although advocacy coalitions are not simply aggregations of interest groups since they will typically include government officials as well. The ACF differs from pluralism in its emphasis on policy-oriented learning and hierarchical belief systems, and it rejects the assumption that all latent interests will be effectively represented.

The ACF was chosen as the basic theoretical reference point for this thesis because it is consistent with actor-based policy network approaches to the policy process. In addition, the model is easily applied to environmental issues. Both Sabatier and Jenkins-Smith are political scientists working in the area of environmental policies and the framework was developed with reference to air pollution policies in the USA and has been tested in several cases involving environmental controversies. The fact that the authors of the framework have developed testable hypotheses makes a critical application of the ACF much easier. Finally, case studies carried out for this thesis can be compared with other critical applications of the ACF (see Sabatier and Jenkins-Smith 1993).

In view of the above factors, it was decided not only to use the ACF in this thesis but to make its critical application an objective. This is potentially interesting because the ACF has not yet been applied outside North America.

Despite its strengths, there are three areas in which the ACF can be complemented for the purposes of this thesis. First, the literature on policy networks offers a number of additional insights on how actors interact in policy subsystems and how such systems are structured. Second, the concept of epistemic communities is

useful in understanding policy learning. Third, the literature on policy change and policy learning is also relevant. Fourth, the concept of international regimes can help understand international policy developments relevant to certification. Finally, the literature on policy instruments allows a more detailed analysis than that provided by the ACF of functioning of the instruments actors use to achieve their objectives. These additional issues are discussed in the subsequent sections.

2.2 POLICY NETWORKS

2.2.1 Policy Networks and the Structural Perspective

The policy network approach adopts a structural perspective and seeks to explain the distribution of power among actors in a social system as a function of the positions they occupy in one or more networks (Knocke 1990: 9). The term “actor” is used to describe any single social entity, be it an individual person or a collectivity such as a corporation (Knocke 1990: 1). Weber’s (1947: 142) definition of “power” is used:

“Power” is the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests.

Networks are channels of communication that perform various functions such as information exchange, negotiation, channelling access to decision-makers and coordination of actions (van Waarden 1992). They have been defined as:

A policy network is described by its actors, their linkages and its boundary. It includes a relatively stable set of mainly public and private corporate actors. The linkages between the actors serve as channels for communication and for the exchange of information, expertise, trust and other policy resources. The boundary of a given policy network is not in the first place determined by formal institutions but results

from a process of mutual recognition dependent on functional relevance and structural embeddedness (Kenis and Schneider cited in Jordan and Schubert 1992: 12).

The basic assumption of the structural perspective is that:

The structure of relationships between actors and the location of individual actors in the network have important behavioural, perceptual, and attitudinal consequences both for the individual units and for the system as a whole (Knocke and Kuklinski 1982: 13).

Policy networks are a generic concept and various categories have been described, including “iron triangles”, “issue networks”, clientelistic and corporatist structures (Kenis and Schneider 1991). Networks have been classified into these categories based on how they vary in the following dimensions: number and type of actors, functions, structure, degree of institutionalisation, rules of conduct, power relations and actor strategies (van Waarden 1992). Kriesi has provided a simpler typology based on state strength or weakness and whether the dominant strategy of the state towards new actors is exclusive or inclusive (Kriesi 1996).

The policy network approach, like the Advocacy Coalition Framework, draws on Hecló’s views of the increasing complexity of civil society and the importance of interactions of experts from various backgrounds in a particular policy area, which led him to develop the idea of one kind of policy network called “issue networks” (Hecló 1978). Like the ACF, the policy network approach takes a managerial-elite perspective (Alford and Friedland 1985: 161-268). It draws on both “normative conformity” and “objective rationality” paradigms of decision-making (Knocke 1990: 18-27), although rationality is seen as bounded. The ACF is thus compatible with the policy network approach: a “policy subsystem” made up of two coalitions of actors could be seen as one particular network structure. However there is one important difference. A structural approach

would focus on coalitions in terms of relations between actors, whereas the ACF adds to this the powerful concept of belief systems. This allows not only the study of arguments and conflicts, but an analysis of their content, which is essential for the purposes of this thesis. On the other hand, the structural approach can assist in making predictions about the behaviour of actors, depending on the structure of the network, which the ACF does not do. In conclusion, the ACF will be used as the basic theoretical framework for this thesis, but the policy network approach will be used as an additional research tool where appropriate.

2.2.2 Policy Domains

The policy network approach has been used to study policy processes at the level of “policy domains”, which have been defined as:

... a subsystem whose organization members are identified by specifying a substantively defined criterion of mutual relevance or common orientation... concerned with formulating, advocating and selecting courses of action to solve the domain’s problems. A domain’s members consist only of those organizations whose interests and actions must be taken into account by other participants. Numerous national policy domains exist in modern states, and their core organizations overlap to a greater or lesser degree (Knocke 1990: 163).

A landmark study in this field was that of the US health and energy domains by Laumann and Knocke (1987). This study placed actors in a policy domain and traced their activities through the steps of the “textbook model” of the policy process. The model is described as follows:

...our orientating framework is a set of **consequential corporate actors**, each possessing (1) variable **interests** in a range of **issues** in a national policy domain and (2) relevant mobilizable **resources**. These actors are embedded within communication and resource-exchange **networks**. The flows of

specialized communications and resources among the actors enable them to monitor and to communicate their concerns and intentions in relevant decision-making **events** that in turn have consequences for their interests (Laumann and Knocke 1987: 5).

It can be seen that the concept of policy domains is very similar to that of policy subsystems used in the ACF. It is therefore possible to draw on the work of researchers in policy network analysis in applying the ACF. In this thesis, van Waarden's work on the dimensions and structure of networks has been used, because this provides a more complete framework than the ACF for describing the parameters of domains, and the kind of relationships which can exist between actors, than the ACF does. Also, Laumann and Knocke's model of how actors interact is very similar to the that of the ACF. It is therefore possible to use their comprehensive study of the US energy and health policy domains as a reference point, although to be consistent with the ACF, the concept of actors' "belief systems" is used rather than actor's "interests". On the other hand, the term "policy domain" is preferred to the more general "policy subsystem" to indicate that the political network approach is being used.

2.2.3 Epistemic Communities

If policy networks are a general category, of which Hecló's issue networks are one example, epistemic communities are a particular type of issue network. An epistemic community is a network of professionals with recognised expertise and authority in a particular domain. Members are seen as having shared normative and causal beliefs, shared criteria for validating knowledge in their area and a common policy enterprise (Haas 1992: 3).

The concept of epistemic communities has been used to study policy-oriented learning and policy change at national and international levels. For example, Adler (1992) has argued that the negotiation of the 1972 antiballistic missile treaty between the USA and the USSR resulted in part from the activities of a US epistemic community of scientists and activists concerned about nuclear

war. Sikkink (1992) has claimed that in the post-World War II period, an international epistemic community made up of academics, non-governmental organisations (such as the International Red Cross) and intergovernmental organisations has helped create national and international human rights regimes. Sikkink has also studied the impacts of organisations like Amnesty International on human rights practices in Argentina. She traces a process whereby issues were initially raised by NGO actors in the USA and Europe, were then taken up by governments who put pressure on the Argentine government, with the result that changes were made in human rights practices in the country. In this case, the epistemic community included NGOs in several countries, and sympathetic government officials in the USA and Europe (Sikkink 1992: 423-35).

Putnam's (1988) model of international politics as a "two-level game" has been used to explain the combination of national and international activities of epistemic communities (Adler and Haas 1992). Putnam describes the two-level game as follows: at the national level interest groups pursue their interests by pressuring the government to adopt policies that are favourable to them and politicians seek power while constructing coalitions among these groups. Meanwhile at the international level, governments seek to maximise their ability to satisfy domestic pressures while minimising the negative impacts of international events. The two levels are interconnected by epistemic communities because values and expectations enter the national political process through the activities of national and international epistemic communities. At the international level, epistemic communities put pressure on governments to not only react to the national political environment but to also solve international problems. In this model, epistemic communities play two roles: sources of policy innovations and channels for diffusion of these innovations (Adler and Haas 1992: 374).

The trends that are said to have led to the development of epistemic communities at the national and international levels are similar to those described in Section 2.2.1, combined with the increasing complexity and uncertainty

surrounding some international issues. The situation concerning environmental issues has been described as follows:

Decision-makers are seldom certain of the complex interplay of components of the ecosystem and are therefore unable to anticipate the long-term consequences of measures designed to address one of the many environmental issues under current consideration. Without the help of experts, they risk making choices that not only ignore the interlinkages with other issues but also highly discount the uncertain future, with the result that a policy choice made now might jeopardise future choices and threaten future generations (Haas 1992: 13).

It has been argued that “decision-makers” will tend to consult epistemic communities in times of crisis, when issues are simultaneously featured in the media and in national and international policy-making fora, leading to pressure for action in response (Haas 1992: 14). As discussed in the introduction, this situation has existed in forest conservation at the international level since the mid-1980s. However epistemic communities can play important roles at other times and without decision-makers calling upon them in terms of defining the scope and nature of policy problems.

The concept of epistemic communities has its origins in Hecló’s “issue networks”. It has been used as an analytical tool to study policy change and learning at the international level. There are similarities between epistemic communities and advocacy coalitions as both are based on belief systems, focus on policy learning and are rooted in the work of Hecló. Epistemic communities provide a useful theoretical tool to complement the ACF (which focuses on national policy domains) in situations where international policy learning is occurring. As mentioned in the introduction, there are indications that this has been the case for international discussions on forest

conservation and forest certification. Within the ACF framework there are at least two possible roles for members of epistemic communities: as policy brokers, and as links between international external systems events and actors in a policy domain.

2.3 POLICY LEARNING AND POLICY CHANGE

The heavy emphasis placed on policy-oriented learning in the ACF has led to a criticism that its authors do not make sufficient distinctions between learning and policy change (Hoberg 1996a). This criticism is exaggerated because the ACF assumes that policy change is the result of both policy-oriented learning and perturbations external to the subsystem. However the criticism does raise the useful point that the ACF can be complemented by referring to recent literature on types of policy change. Drawing on the work of Durrant and Diehl (1989) who identified modes of policy change (incremental or paradigmatic) and speed of change (fast or slow), Howlett (1998) has suggested that policy changes can be linked to changes in actors and ideas (Table 2.2).

Howlett argues that the mode of policy change will be paradigmatic only if changes have occurred in dominant sets of ideas. The speed of policy change is affected by changes in actors: when actors change, rapid policy change can occur.

The ACF concept of belief systems is more complex than simply ideas. Belief systems are hierarchically structured, and address interests and values as well as ideas. However, most ideas (in the sense meant by Howlett) can be located in the ACF policy core and if we assume this, Howlett’s model can be seen as compatible with the ACF. This allows us to classify policy change along two dimensions (speed and mode), and to hypothesise that certain types of policy change will be associated with changes in actors or changes in the policy cores of their belief systems. This will be useful in the case studies in terms of distinguishing the factors involved in policy change.

Table 2.2 The Effects of Changes in Actors or Ideas on Policy Change

Changes in Ideas	Changes in Actors in the Subsystem or Domain	
	Yes	No
Yes	Rapid, paradigmatic policy change	Slow, paradigmatic policy change
No	Rapid, incremental policy change	Slow, incremental policy change

Source: adapted from Howlett (1998)

2.4 INTERNATIONAL REGIMES

The ACF is designed to examine policy change at the level of policy subsystems or domains, in other words at the national or sub-national level. However, as mentioned in the introduction to this thesis, there are international dimensions to forest certification. For example, the idea was first raised in an international forum (the International Tropical Timber Organization) and the development of certification and buyers' groups is closely linked to the international trade in forest products. Several scholars have used the concept of international regimes to analyse international forest policy processes and discussions (e.g., Gale 1996; Humphreys 1996b; Glück *et al.* 1997).

International regimes have been defined as:

sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations (Krasner 1983: 2).

Following this definition, an international regime may be said to exist when a group of actors adheres to a commonly accepted norm, which subsequently affects their behaviour. Regimes may be comprehensive, or they may be issue-specific if they only affect some issues in the given area (Humphreys 1996b). Most of the literature on international regimes has traditionally focussed on relations between states, but recently in a number of areas including forest policy some authors have begun to stress the importance of non-state actors such as NGOs (e.g., Adler and Haas 1992; Sikkink 1992; Gale 1996). Although there is a general

consensus on what international regimes are, there is little agreement in the literature on how they function. Competing explanations include power-based, interest-based and cognitive theories. Epistemic communities, which were discussed in Section 2.2.3, are an example of the latter. These explanations have been reviewed in detail by Gale (1996) and Humphreys (1996b).

Leaving aside the functioning of regimes, there is a consensus in the literature concerning forest policy that a comprehensive international forest regime does not yet exist. However, the International Tropical Timber Organization (ITTO) and the Tropical Forest Action Programme (TFAP) can be seen as examples of issue-specific international regimes. Humphreys has suggested that the Forest Stewardship Council (FSC) is an example of a new issue-specific non-governmental regime (Humphreys 1996b).

International regimes, like advocacy coalitions, can be made up of a variety of actors. The regime concept can complement the ACF approach by introducing an international dimension, and it will therefore be used in this context in this thesis.

2.5 POLICY INSTRUMENTS

The approach taken in this thesis is to consider forest certification as a policy instrument, defined as:

A method through which government seeks a policy objective...the underlying methodology or approach used in a program or part of a program (Salamon 1989: 29).

For the purposes of this thesis, the users of policy instruments will not be limited to government, but will also include NGOs and the private sector. A programme may be made up of one or more policy instruments.

Policy analysis has been described as “instrumental” for several reasons. First, from a descriptive and analytical perspective, it seeks to objectively examine the relationships between the goals, means and effects of policies. Secondly, from a normative perspective, it seeks to influence the construction of policies by introducing systematic reflection on cause-and-effect relationships in policy debates (Elmore 1987). Thirdly, a case can be made both empirically and analytically that policy-makers make use of a set of instruments or “policy tools” (Salamon 1981).

The policy instruments approach evolved in the USA over the last two decades in a political climate where there has been pressure for privatisation, deregulation and delegation of central government functions in a number of areas.

As Salamon (1989: 13) has noted:

to come to terms with these new forms of public action, therefore, new theories and concepts will be needed. Instead of command and control, such theories will have to emphasize **bargaining** and **persuasion**. Instead of clarification of directives, they will have to stress the manipulation of **incentives**. To formulate such a theory, however, it is necessary to begin with a clearer understanding of the basic operating characteristics of the major tools of government action now in widespread use.

The policy instruments approach is based on two premises. First, that it is possible to distinguish a limited number of devices or means by which the multitude of governmental programmes operate. Second, that each of these devices has a basic set of features and associated likely set of consequences, when the approach is applied (Salamon and Lund 1989).

Several authors have put forward suggestions on instrument choice, i.e., the factors that determine selection of a particular policy

instrument in given circumstances (e.g., Woodside 1986; Schneider and Ingram 1990; Howlett 1991). There have also been various efforts to classify policy instruments or tools (Kirschen *et al.* 1964, Lowi 1972; Salamon 1981, 1989; Elmore 1985, 1987; Linder and Peters 1989; Schneider and Ingram 1990). However, each classification has a number of problems. The simpler schemes, some of which use only four categories may have as much variance within the categories as between them (Schneider and Ingram 1990). It is very difficult to decide for any specific policy and classification, how that policy should be classified, and the objective basis for classification is therefore weak (May 1986). In addition, the categories are not necessarily mutually exclusive leading some authors to claim, in apparent despair, that “It appears that these schemes do not conform to fundamental standards for taxonomy construction” (Linder and Peters 1989: 40).

Despite the problems with existing classifications of policy instruments, two are of particular relevance for the study of certification. Schneider and Ingram’s (1990) typology that divides policy instruments into five broad categories (authority, incentives, capacity-building, symbolic and hortatory and learning) is of particular relevance. The authors of this classification provide an analysis of each category and the behavioural assumptions underpinning it. They note that if people are not taking actions needed to ameliorate social, economic or political problems, there are five reasons that can be addressed by policy (see Table 2.3).

Forest certification cannot be readily classified into one of these categories but it includes elements which characterise incentives, capacity-building, symbolic and learning tools.

The second classification is that used by the Organisation for Economic Co-operation and Development (OECD). This classification, which was presented in Chapter 1 allows a subdivision of Schneider and Ingram’s category of “incentives” into several subcategories.

2.5.1 Programme Implementation

As mentioned in the introduction to this chapter, this thesis does not focus on programme

Table 2.3 Types of Policy Instruments

Type of Policy Instrument	Authority	Incentives	Capacity-building	Symbolic	Learning
Description	Statements backed by the authority of government that grant permission or prohibit specific actions	Instruments that produce tangible negative or positive payoffs to induce complacency or utilisation	Instruments that provide information and resources to enable targets to carry out activities or make decisions	Instruments designed to alter the perceptions of the policy-preferred activities	Instruments that assist targets and policy promoters (agencies in defining problems and solutions
Reason tool is used	Target population does not believe that the law directs or authorises them to take action	Target population lacks the incentive to take the action needed	Target population lacks capacity to take actions needed	To alter beliefs and perceptions of target populations	To assist targets and agencies in understanding and agreeing on what needs to be done about a specified problem
Behavioural assumptions	Targets are motivated by a commitment to obey laws without tangible incentives	Individuals are utility maximisers	Targets facing barriers due to lack of information or resources	Targets are more likely to act in accordance with desired policy perspective if they see this as consistent with their beliefs	Targets and agencies are capable of learning and selecting appropriate policy tools
Example	Laws	Grants	AIDS prevention programmes	Advertisements against drug use by well known public figures	Mediation

Source: adapted from Schneider and Ingram (1990)

implementation. However this phase of the policy cycle cannot be ignored and some theoretical tools are necessary to address it. One of the advantages of the policy instruments approach is that it provides a potential bridge between the analysis and implementation phases of the policy cycle:

Focusing on instruments is an attempt to collapse the creation of policy options together with the assessment of their operating characteristics and potential effects, so that questions of implementation are inseparable from questions of analysis (Elmore 1987: 185).

In his work on programme implementation and evaluation, Knoepfel has proposed a number of elements of relevance to this thesis. First, a programme may be seen as being constituted of five elements: a core of **objectives**, and inner layer of **success indicators** and **policy tools**, and an external layer of **organisation and financing** and **administrative procedures** (Knoepfel 1995: 140-7). These layers are compatible with the ACF model of belief systems and government programmes.

Second, the result of a programme can be considered in terms of three phases: the **outputs** actually produced by the programme; the **impacts**

these outputs have on the target groups; and the **outcomes** in terms of modified behaviour of the target groups (Knoepfel 1995: 54).

The technique of “forward mapping” can be used to conduct *ex ante* evaluations by identifying potential problems, scenarios and options for programme implementation, while programmes are still being formulated (Elmore 1985). This approach is used in the case studies as certification programmes studied were still at early stages of implementation.

2.6 EMPIRICAL ASPECTS – RESEARCH METHODS

The basic conceptual framework for the dissertation is the Advocacy Coalition Framework. This framework is accompanied by a number of hypotheses (see Annex 2.1). Achievement of the three objectives of the thesis involves not only a critical application of the ACF but also the description and analysis of the development of certification programmes in Canada, Sweden and Indonesia. These countries were selected on the basis of three criteria:

- 1) the international significance of their forests and timber trade;
- 2) the fact that there have been extensive policy discussions and technical activities on certification in the countries, involving government, NGOs and the private sector; and
- 3) the need to examine both performance and systems-based approaches to certification, and the wish to have at least one tropical forest and one temperate forest case study to increase representation.

The following research questions were identified, based on the objectives of the thesis and the elements of the ACF:

- What are the relevant Relatively Stable Parameters?
- What External System Events have affected the forest policy domain in the country over the last decade?

- Who are the influential actors in the forest policy domain and what are their beliefs, resources and strategies?
- Which of these actors have been promoting or opposing forest certification and why?
- Why is certification on the policy agenda today?
- How did the programme develop?
- How is the proposed certification programme constructed?
- Which issues may arise during programme implementation?

The research questions were used to prepare a questionnaire (Annex 2.2) based on the ACF hypotheses.

2.6.1 Research Design

The research design was based on the case study, following Yin (1989), and Miles and Huberman (1994). Case studies have the advantage of allowing detailed exploration of the developments in an individual country over a limited time period (Gale 1966: 9). A potential disadvantage of case studies is the need to be cautious in generalising findings from single case studies (Kennedy 1979). This problem was addressed by using the same research methods and questions in the three case studies, which allows both analysis of the individual case studies and comparisons between the case studies using techniques developed by Miles and Huberman (1994: 172-205). The observational unit in the case studies was individual “key informants” who were selected to represent actors. Although the same research methods were used in each case study, a particularly detailed application of the ACF was carried out in Indonesia as this is the first case where the framework has been applied in a developing country, and it was important to see whether it was applicable outside a western democratic country.

2.6.2 Data Collection

Two research tools were used for data collection: primary and secondary literature reviews and key informant interviews. The primary literature consists of trade and forestry statistics, forestry

regulations, research articles on social and ecological impacts of logging, as well as numerous documents relating to criteria and indicators for certification of forest management. The secondary literature covers political and economic analyses of current forest policies in the countries concerned by national and foreign scientists and NGOs, analyses by FAO and the World Bank and press articles.

In addition to the literature review, a series of semistructured interviews were carried out with key informants. The questions for the interviews were designed to provide information that was relevant to the research questions. Key informants were identified by a combination of reputational and positional approaches (Laumann and Knoke 1987: 95-100). The positional approach was used first, and suggested the need to interview senior figures in private sector forestry associations, the Ministry of Forestry (or equivalent), universities and NGOs. Actual interviewees were then identified in a reputational manner from the literature review, from previous contacts in the countries and on the basis of recommendations from other researchers.

Every effort was made to identify key informants who had been involved in the debate on forest certification, and to interview representatives of all the major interest groups in the forest policy domain. However, no particular effort was made to balance the sample of respondents. Thus, for example, in Sweden ten private sector representatives were interviewed and only two from government, partly because the government has not played a leading role in the policy process on forest

certification and partly because I was trying to understand the basis of differences between forest companies in their approaches to certification. Because the sample was not balanced, no quantitative analysis of responses was undertaken. It should also be noted that quantitative analysis would have been further complicated by the fact that for many questions (e.g., for Question 1 (What are the main problems facing Indonesian/Canadian/Swedish forests today?)), there was no limit to the number of issues a respondent could mention, which in fact ranged from 0 to 8.

The semistructured interview techniques used were based on Mikkelsen (1995: 102-16). Most interviews lasted for approximately one hour and followed the “interview guide approach” in which the topics and issues covered are determined by the questionnaire but the sequence and wording of questions are determined in the course of the interview (Patton 1990: 288-98). A few interviews were of the “informal conversational type”, in cases where key informants were met in an unplanned situation. Finally, telephone and e-mail contacts were arranged with selected informants to clarify information during the course of writing up the case study.

2.6.3 Data Analysis

The data collected from both the literature and the interviews was primarily qualitative. Accordingly, qualitative data analysis procedures were used, based on Miles and Huberman (1994). Data analysis involved three phases: summary of information, presentation (usually in the form of tables) and elaboration and verification of conclusions.

Table 2.4 Summary of Interviews Carried Out in Case Studies

Country	Advocacy Coalition					Total
	Forestry	Ministry of Finance	Sustainable Forestry	Environmental	Other	
Indonesia	10	3		10	7	30
Canada	21			14	3	38
Sweden	4		26		7	37
GRAND TOTAL						105

The use of qualitative data analysis is consistent with the majority of previous applications of the ACF to policy change (e.g., Barke 1993; Brown and Stewart 1993; Mawhinney 1993; Munro 1993).

Quantitative data analysis methods are generally considered more objective and reliable than qualitative ones, and better at demonstrating linear, causal relationships of the kind: if X increases, so will Y (Reichart and Cook 1979: 11). However, such clear-cut relationships are rare in policy analysis where events are usually the result of multiple, interlinked causes (Manicas 1985: 189). In addition, in order to carry out quantitative analysis it is necessary to have quantitative data, normally from experiments or surveys based on questionnaires distributed by post. However experimentation was not an appropriate data collection method for this thesis and because of the novelty, controversy and confusion sometimes associated with certification, it was decided to collect data from

interviews rather than by postal survey. In consequence, the data is mostly qualitative. It should be noted that the survey method would have been particularly inappropriate in Indonesia where forest policy is a sensitive subject and respondents would have probably been hesitant about responding to a survey. Finally, considerable attention has been given by qualitative researchers over the last decade or so to addressing problems of reliability and validity in data analysis (Kirk and Miller 1986), and to methods for demonstrating causality (e.g., Miles and Hubermann 1994: 144-8).

Information from the interviews was typed up. Data were then condensed into a series of tables, following Miles and Huberman (1994: 90-141). This information was cross-checked and compared with material from the literature review to improve validity and reliability (Kirk and Miller 1986). Analysis was first carried out at the level of the individual case studies, then by comparing the three case studies.

Chapter 3

The International Policy Dialogue on Forest Certification from 1990 to 1997

3.1 TOWARDS AN INTERNATIONAL FOREST REGIME

The main focus of this thesis is on the development of certification programmes at the national level in Indonesia, Canada and Sweden. Before examining the situation in these countries it is useful to review the international policy dialogue on certification, concentrating on the period 1990-1997. There are both empirical and theoretical reasons for doing this. It was argued in the introduction to this thesis, that forest certification was initially promoted by international NGOs as a reaction to the failures they perceived in the work of the International Tropical Timber Organization (ITTO) and Tropical Forestry Action Programme (TFAP) in solving the problems of deforestation and forest degradation. Also, before the emergence of national certification programmes a number of international certifiers were already active. It is therefore useful to study international activities and discussions on forest certification and related subjects, such as ecolabelling, to provide a background on the policy context for the national case studies.

At the theoretical level, both the ACF and the concept of epistemic communities are concerned with ideas, beliefs and policy-oriented learning. It is therefore useful to review how ideas on certification itself, and related topics, have been discussed in international fora. A relevant theoretical concept is Putnam's (1988) "two-level game", which was presented in Section 2.2.3. Putnam's model refers to governments, but a preliminary view of the international policy dialogue on certification suggests that NGOs and other actors may also "play" the "two-level game". Putnam's model is compatible with the concept

of the international regime presented in Section 2.4, where there is an interaction between national and international levels, and where actors' behaviour at the national level is partly shaped by international norms.

It was noted in Section 2.4 that a comprehensive international forest regime does not yet exist, although the TFAP and ITTO may be seen as issue-specific intergovernmental regimes, and the Forest Stewardship Council (FSC) as an issue-specific private regime. Tarasofsky (1995) has referred to a number of additional issue-specific regimes such as the Convention on Biological Diversity (CBD), other global treaties that address some aspects of forest issues, and regional agreements that have an impact on forests.

In the period studied, there have also been extensive international discussions on the negotiation of a Global Forest Convention (Glück *et al.* 1997). A convention is not synonymous with a regime, but may provide a framework for, and formalisation of, the norms of the regime (Keohane 1993). The discussion below does not provide a comprehensive overview of the discussions and progress towards an international forest regime, but focuses on selected elements and institutions that are directly relevant to the development of forest certification programmes, beginning with ITTO's work on criteria and guidelines for sustainable forest management. Selected elements of the international trade regime are also discussed. In the eight-year period from 1990 until the end of 1997 a number of key events occurred: the first forest certification (in Indonesia in 1990), United Nations Conference on Environment and Development (UNCED), the conclusion of the Uruguay round of General

Agreement on Tariffs and Trade (GATT), Ad hoc open-ended Intergovernmental Panel on Forests (IPF), the creation of the FSC and the first meeting of IFF (Ad hoc Intergovernmental Forum on Forests). Over this period, certification evolved from a concept to a practical reality. By the end of 1997 when research for this chapter was completed, forest certification programmes had been developed in the three case-study countries, and were either already operational or in the final stages of testing.

Information for this chapter was drawn from publications and official reports of meetings, complemented by the author's personal experience as a WWF representative at a number of ITTO, UNCED, International Organization for Standardization (ISO) and FSC meetings. The chapter concludes with an overview of the different ideas and beliefs which have been expressed on forest certification in international fora, and a discussion of the factors which may have contributed to certification emerging as a policy instrument in the 1990s.

3.2 SUSTAINABLE FOREST MANAGEMENT: THE CONCEPT AND ITS APPLICATION

Sustainable forest management is seen as one of the most important objectives of a future global forest regime by most authors (e.g., Gale 1996; Humphreys 1996a; Glück *et al.* 1997). The idea of managing forest resources for production of wood today, while keeping in mind the needs of future generations has a long history in forestry. In Europe, it was formulated as early as 1804 by the forester Hartig (Schmutzenhofer 1992). This concept of "sustained yield" has been described as a fundamental doctrine in forestry (Glück 1987) and has been summarised as:

To fulfill our obligations to our descendants and to stabilize our communities, each generation should sustain its resources at a high level and hand them on undiminished. The sustained yield of timber is an aspect of man's most fundamental need: to sustain life itself (Duerr and Duerr 1975: 31).

Over time, the interpretation of sustainability in forestry has gradually become more inclusive, with the development of the concept of sustainable development (WCED 1987) and the growth of the environmental movement, which has pressed for more attention to be given to forest protection (Poore 1995). The concept has gradually come to be understood as not just maintaining a sustained yield of timber, but as maintaining the productive capacity and ecological integrity of forests (Wiersum 1990). At a conference on defining sustainable forest management, organised by the US NGO The Wilderness Society in 1993, which brought together forestry and environmental scientists, participants agreed that sustainable forestry should be ecologically sound, economically viable and socially desirable (Sample *et al.* 1993).

Scientists and international organisations have formulated various definitions of sustainable forest management, and these have been summarised by Schlaepfer (1997). Some critics have argued that sustainability has been defined so broadly in these definitions that its meaning is unclear (Dixon and Fallon 1989). However this criticism is partly misguided because as Wiersum (1995) has noted, the recognition of the multiple-use nature of forest resources means that the presence of multiple actors and values is also recognised. These actors have different opinions on which resources should be given priority. In consequence, sustainability should be seen as a permanently evolving concept, which can be defined only through political discussions among actors, and not through the emergence of a scientific consensus. This approach underpins the concept of ecosystem-based management which explicitly recognises the importance of economic and social interactions in identifying which forest goods and services should be sustained, and how (Schlaepfer 1997).

Defining the concept of sustainable forest management has been one of the controversial issues in the international policy dialogue on forests in the 1990s. This controversy has contributed to the difficulties of establishing an international forest regime with the objective of sustainable forest management. A related issue is the choice of policy instruments that should be

used to operationalise sustainable forest management. There has been a tendency in many countries to rely heavily on regulatory instruments in forest management (OECD 1992, Cabbage *et al.* 1993). However, the effectiveness and appropriateness of this approach can be questioned with regard to sustainable forest management because of the need to favour policy dialogue between different actors and continually revise objectives. A mix of different policy instruments seems to be more appropriate, and the need for incentives and learning instruments is increasingly recognised (Glück *et al.* 1997).

It is in this context of a dialogue on the meaning of sustainable forest management, and the search for policy instruments to operationalise it, that certification has emerged. Certification cannot be seen in isolation in this context. It has been influenced by other initiatives and it in turn has influenced them. This section discusses several relevant initiatives in international fora related to certification.

3.2.1 The International Tropical Timber Organization

The International Tropical Timber Organization (ITTO) was established in 1986 on the basis of the International Tropical Timber Agreement (ITTA 1983). The agreement was renegotiated in 1994 (ITTA 1994). The ITTA is one of a series of commodity agreements established under the auspices of United Nations Conference on Trade and Development (UNCTAD). It differs however from other commodity agreements in that it recognises the need for conservation of the resource that produces the commodity, in this case forests. One of the objectives of the ITTA (1983) was:

To encourage the development of national policies aimed at sustainable utilization and conservation of tropical forests and their genetic resources, and at maintaining the ecological balance in the region concerned. (ITTA 1983: article 1h)

Another, potentially contradictory, objective was to promote the expansion and

diversification of the international tropical timber trade. ITTO was also to be a forum for cooperation between timber-producing and consuming members. Article 14 of the ITTA (1983) made specific reference to collaboration with NGOs and intergovernmental organisations. Timber trade associations have also played an active role in ITTO's work.

As mentioned in the introduction, the 1980s were a time of increased public concern about deforestation and forest degradation, particularly in the tropics. The responsibilities of the international tropical timber trade in this respect were already the subject of controversy before the ITTO was established, for example, with the publication of a report by Friends of the Earth-UK about the UK tropical timber trade (Nectoux 1985). Once the ITTO was set up, the biennial meetings of its Council rapidly became the scene of debates and confrontations between NGOs, governments and representatives of the tropical timber trade. International NGOs, such as World Wide Fund For Nature (WWF) and Friends of the Earth (FOE), together with national NGOs from tropical timber-producing countries such as Malaysia and Indonesia, put ITTO under pressure to define "sustainable forest management" and take steps to promote it (WWF 1989). In response to these pressures, ITTO commissioned a study of the status of natural forest management in the tropics, which concluded that:

The extent of tropical moist forest which is being deliberately managed at an operational scale for the sustainable production of timber is, on a world scale, negligible (Poore *et al.* 1989: xiv).

After the publication of this report, NGOs attending the ITTO meetings led by FOE, began to lobby for ITTO to carry out a feasibility study on labelling of tropical timber from sustainable sources. The situation has been described in an ITTO report as:

During the ITTO's council meeting in May 1989, discussions were held at the instigation of some NGOs, on studying the possibility

of labelling timber, including both logs and manufactured wood products, from tropical forests to indicate whether they came from forests managed for sustainable production (ITTO 1991).

By this time, FOE had published another study of the European tropical timber trade, recommending the establishment of a labelling system to identify timber from sustainable sources (Nectoux and Dudley 1987). In May 1989, the ITTO council reviewed a pre-project proposal submitted by the UK government in collaboration with FOE to study the feasibility of labelling tropical timber. The project caused concern among several tropical timber-producing countries that saw labelling as a disguised means of promoting timber boycotts. In consequence, the proposal was revised and turned into a broader review of incentives for sustainable forest management. The result of the project was a report which concluded that labelling of tropical timber appeared to be unworkable in most tropical countries, but stated that packages of incentives to improve forest management should be prepared and criteria for assessing sustainability should be developed (ITTO 1991: 50-1).

3.2.1.1 *The International Tropical Timber Organization and Forest Certification*

A 1993 report for ITTO on incentives recommended the establishment of a system of a “country certification” schemes to verify that producer countries were making progress towards sustainable forest management and Target 2000 (see below) (LEEC 1993). The idea of country certification was subsequently discussed by the IPF but did not gain significant support from governments, most of whom saw certification as a voluntary market instrument which governments should not be directly involved in developing or implementing (UNESC 1996a). ITTO’s work on criteria is more relevant for the development of forest certification programmes. From 1990 to 1993, ITTO published various guidelines and criteria for sustainable management of tropical forests (ITTO 1990b, 1992a, 1993a,b).

Also in 1990, ITTO adopted Target 2000, a non-legally binding commitment of the members of the organisation which was included in the ITTO action plan (ITTO 1990a). The year 2000 was given as the date by which the entire tropical timber trade should be sourced from sustainably managed forests. Again, the influence of NGOs can be seen in the establishment of this target as WWF had set a similar target in 1989, but for 1995 (WWF 1991; Humphreys 1996a: 68-9). Target 2000 is relevant for the discussions on forest certification because it raises the issue of how sustainable forest management will be assessed.

In November 1992, the ITTO council meeting was the scene of vigorous criticism by Brazil, Malaysia and Indonesia about an Act on tropical timber labelling adopted by the Austrian parliament in June 1992. This Act made labelling of tropical timber imports obligatory in Austria, and was seen by tropical timber-producing countries as an unacceptable trade barrier (Rametsteiner 1994). International pressure on Austria in ITTO and the threat of a formal complaint to GATT led to a revision of the Act in 1993. This issue is of particular relevance to the development of certification in Indonesia, and is discussed further in Chapter 4.

In May 1994, ITTO published the first international report on the status of forest certification (Baharuddin and Simula 1994) and organised a working party meeting to discuss the issue. The report was important because it provided not only an overview of the status of the certification debate in ITTO member countries, but also a definition of certification, which was to become the standard and which is used in this thesis. The authors classified certification as a combined instrument of trade and environmental policy. They described the international context in which certification was emerging in the following terms:

There is a growing world-wide concern about environmental problems which is increasingly affecting trade. Environmental concerns about timber are part of broader product-related concerns of consumers in industrialized countries.

These concerns are expected to continue spreading in the future... Environmental concerns about timber and timber products are limited to sustainability of forest management as part of the production process. The concerns are shared by consumers (environmental impacts of the production process of the products to be consumed), trade (market shares, company image) and industry (long-term availability of timber)... There is no more debate on the “why and wherefore” of conserving ecosystems and forests and promoting economic development, albeit sustainable development. Discussion has moved on to a matter of modalities... the adoption of Agreements on Environment and Development at Rio de Janeiro in 1992. ITTO’s Target 2000... ITTO Guidelines... have provided the multilateral framework to minimize the differences between timber producing and consuming countries (Baharuddin and Simula 1994: vii, 2-3).

Baharuddin and Simula noted that the primary objectives of certification were to improve forest management in order to achieve sustainability, and to ensure market access of certified timber, particularly in markets with high environmental awareness. Ancillary objectives could include improved control over harvesting, higher recovery of royalties, taxes and fees, increased transfer of funds to forest management, internalisation of environmental costs, structural development of wood processing industries, improved productivity and cost savings, and elimination of trade intermediaries. They identified the following general requirements for a viable certification system: credibility, coverage of all types of timber, objective and measurable criteria, reliability, independence, voluntary participation, non-discriminatory, acceptable to the parties involved, adaptability to local conditions, cost effectiveness, transparency, goal-orientation and practicability.

The report noted that NGOs were broadly supportive of certification in 1994, whereas views

in the timber trade and industry varied from strong support to active opposition. Governments were somewhat undecided because of the novelty of certification, but three positions could be identified: definitely supporting, tentatively supporting (sometimes with reservations), definitely against. Government positions can be classified according to the statements made by their representatives at the ITTO working group in May 1994 (Annex 3.1). It can be seen that most governments expressed tentative support for certification, albeit with a variety of reservations. Several important tropical timber exporters, including Malaysia and Indonesia linked the implementation of certification schemes to ITTO’s Target 2000 and said that certification should be implemented by that date, rather than immediately. Only two countries (Brazil and Congo) were definitely against certification. Canada, the USA and Switzerland expressed support for private-sector certification schemes. Comparing the report to a summary of the status of forest certification by the end of 1997 (Annex 3.2) shows that there is no clear correlation between the positions taken on certification by governments in 1994 and the status of certification in 1997. This is not entirely surprising because it is often actors other than government that have taken the lead in developing certification programmes.

The ITTO report noted that certification alone was likely to be a second-best instrument to achieve improved forest management and assured market access, and that its effectiveness would be enhanced if it was part of a policy package. The authors concluded:

In spite of the uncertainties related to the effectiveness and relevance of environmental labelling as a policy instrument for conservation of natural resources, labelling is expected to become more common, not least because of increasing demand for environmental information on products by consumers, and the less discriminatory nature of labelling as a policy tool compared to other instruments (e.g., product standards and regulations) (Baharuddin and Simula 1994: vii).

In a follow-up study, Baharuddin and Simula (1996) noted that the debate on certification had advanced in several countries, notably Indonesia, since 1994 and that the potential supply of timber from forests certified by the four operational certifiers (Rainforest Alliance SmartWood, Scientific Certification Systems, SGS Forestry and Soil Association) was 3.5 million cubic metres per year, up from 1.5 million in 1994. The authors concluded that market demand for certified timber was uncertain and estimated that a maximum of 15% of internationally traded wood products would be influenced by certification by the year 2000. They also stressed the need to link the ongoing international processes on Criteria and Indicators for sustainable forest management (see below), with the processes for the development of certification standards. A third report by the same authors in 1997 provided an update on international developments in certification and reviewed the development of national-level certification schemes in a number of countries (Baharuddin and Simula 1997).

Another study commissioned by ITTO (Wadsworth and Boateng 1996) concluded that market demand for certified timber was strongest in Germany, the Netherlands, Belgium and Austria, moderate in the USA and UK and virtually non-existent in Japan and Korea. Even in the countries with relatively high demand, interest was confined to certain parts of the market such as the “do-it-yourself” retail sector and the industrial joinery sector. The study further found that there was little willingness among consumers to pay more for certified products but noted that the market for certified timber was not simply a “niche” one, particularly as certification began to be applied to temperate as well as tropical forests. The study does not suggest why the market demand for certified timber is strongest in the “ecosensitive” countries listed above, but it can be observed that they are all democratic countries with active NGOs and “green” political parties working on forest conservation issues. These NGOs and political parties have mobilised public opinion on forest conservation issues and sometimes succeeded in placing them on the public policy agenda.

It can be seen that a number of fundamental building blocks for certification programmes, which will be referred to subsequently in the national case studies (i.e., incentives, criteria, definition of certification and Target 2000), were developed under the auspices of ITTO, partly in response to pressure from international NGOs such as FOE and WWF. ITTO also played a role as a forum for international discussions on certification. However the NGOs gradually became disenchanted with ITTO’s perceived vacillation on labelling and began to pursue initiatives outside this domain.

In November 1991, WWF produced a position paper, which included the following comment:

Meanwhile, because of ITTO’s inertia, conservation NGOs, including WWF, are working directly with the timber trade on incentives and labelling...WWF is helping establish a credible independent labelling scheme that gives consumers a choice. A group of small-scale traders and several environmental groups – the Forest Stewardship Council – is working on the scheme details...in short, a labelling scheme for wood products is developing, leaving the ITTO behind (Elliott and Sullivan 1991: 5-6).

In 1992, FOE and the World Rainforest Movement also published a critical review of ITTO’s activities (FOE/WRM 1992). In a study of the ITTO, Gale (1996) argued that the participants in ITTO deliberations can be divided into four coalitions. The producing-country coalition sought to promote and defend the rapid exploitation of tropical rainforests for economic development under the auspices of state sovereignty and economic development. The consuming-country coalition promoted a longer-term approach to tropical forest management under the influence of sustainable development. The industrial coalition defended its economic interests. Finally, a loose coalition of environmental NGOs defended ecosystem management, “green trade” and community control over resources. Gale concludes from his analysis

that a tacit alliance was formed between the producer and consumer government coalitions and the tropical timber industry to block the negotiation of norms, procedures and compliance mechanisms needed to institute a sustainable tropical timber trade regime, and that in consequence environmental NGOs largely abandoned ITTO as a forum. On certification he notes:

The reluctance of governments to negotiate a certification and labelling scheme under the auspices of the ITTO stemmed from a number of considerations, including doubts about such a scheme's technical feasibility, cost, GATT compatibility and industry resistance. On the other hand, certification was the mildest of the negative compliance measures suggested (which included bans, boycotts, tariff increases, voluntary export restraints, quotas and levies). By failing to move forward on certification and labelling, governments signalled their intention to create a minimally-effective Tropical Timber Trade Regime that ensured that few consequences and no costs would result from a failure to implement its provisions (Gale 1996: 397).

From a theoretical perspective, it is interesting to note that Gale's approach is similar to that of the Advocacy Coalition Framework, although he does not refer to the ACF. His study could be seen as an application of the ACF, not to a national policy domain, but to an international forum and to the process of regime formation therein. One can also analyse events in ITTO from an epistemic communities perspective. The presence of two epistemic communities, one concerned with forest conservation, the other with economic development, and forest exploitation can be surmised from Gale's analysis. We can also see examples of Putnam's two-level game in ITTO, with the UK government's proposal of a feasibility study on timber labelling clearly being partly motivated by domestic political pressures from NGOs. Similarly, the presence and activities of international NGOs at the national level and in ITTO shows that these organisations were able to be active at two levels as well.

A detailed study of the policy processes within ITTO, and of how national and international events were articulated, is however beyond the scope of this thesis. Four main points can be drawn from this review of developments in ITTO. First, several initiatives largely promoted by NGOs led to the creation of some essential building blocks for certification. Second, by the early 1990s many of these NGOs had become disenchanted with ITTO and were looking for other ways to promote certification. Third, certification was already controversial as a concept and was questioned, or even opposed, by some governments in ITTO. Fourth, the events in ITTO show a complex articulation of national and international activities of governments, NGOs and timber trade organisations. The national and international levels were closely linked, and actors sought the most favourable venues to achieve their policy objectives.

3.2.2 The United Nations Conference on Environment and Development

The United Nations Conference on Environment and Development (UNCED) was held in June 1992 in Rio de Janeiro and was an important event in the international debate on forests. No agreement was reached on proposals for the negotiation of a global forest convention, but instead a statement of "Forest Principles" was adopted (UNCED 1992a) and a chapter of "Agenda 21" was devoted to measures to combat deforestation (UNCED 1992b).

It is interesting to note that the first official call for a global forest convention came from a review of the Tropical Forestry Action Plan (TFAP) in 1990 (Ullsten 1990: 48). FAO subsequently prepared a draft convention (FAO 1990). It can be argued in this respect, that both certification and the proposed convention have a shared origin in dissatisfaction with the results of TFAP, although this was clearly not the only driving force for either. This dissatisfaction led several international NGOs to look towards the market instrument of certification while a number of developed country governments favoured a forest convention. The G7 group of industrialised countries formally supported the

convention later in 1990, with the EU and Canada being active proponents in the UNCED preparatory meetings, but tropical countries (particularly Malaysia, Colombia, India and Brazil) successfully opposed the convention at UNCED (Humphreys 1996a: 84-103).

Despite the setback for the convention at UNCED, the “Forest Principles” marked a significant step forward in several respects. In response to complaints by tropical countries that international discussions on forests unfairly singled out tropical countries, the “Forest Principles” cover all types of forests, in all regions. Stakeholder participation in forest policy formulation and implementation, maintenance of the multiple functions of forests, the respect of national sovereignty and the rejection of unilateral trade measures were all specifically mentioned. Certification was not referred to directly but indirect support was provided by article 13c:

13 c. Incorporation of environmental costs and benefits into market forces and mechanisms, in order to achieve forest conservation and sustainable development, should be encouraged both domestically and internationally. (UNCED 1992a)

The “Forest Principles” also mentioned the development of criteria and guidelines for sustainable forest management which are related to certification and are discussed below:

8d. Sustainable forest management and use should be carried out in accordance with national development policies and priorities and on the basis of environmentally sound national guidelines. In the formulation of such guidelines, account should be taken, as appropriate and if applicable, of relevant internationally agreed methodologies and criteria (UNCED 1992a).

Chapter 11 of Agenda 21 “Combating Deforestation” gave specific support to the development of criteria and guidelines (UNCED 1992b).

3.2.3 International Processes on Criteria and Indicators for Sustainable Forest Management

After UNCED, the development of criteria and indicators for sustainable forest management became a major focus of intergovernmental discussions and meetings. Several independent processes, which are discussed below, emerged. The main actors in these processes were forestry ministries and agencies, and intergovernmental organisations (mainly FAO, UNEP and ITTO). There was some participation of international NGOs (e.g., WWF and Greenpeace in the pan-European Process, and the Global Forest Policy Project in the Montreal Process).

3.2.3.1 The Helsinki Process

The “Helsinki Process (later renamed “pan-European Process”) began at a conference of European forest ministers held in Helsinki in June 1993, where representatives of 40 countries and the European Union (EU) adopted four resolutions concerning the protection and sustainable management of forests in Europe. The first resolution, “H1 General Guidelines for the Sustainable Management of Forests in Europe”, reaffirmed the signatory states’ support for UNCED agreements on forests, and for the concept of a global forest convention. A commitment was made to developing and implementing national or regional guidelines for forest management (Loiskekosi *et al.* 1995). At the first Expert-Level Follow-up Meeting held in June 1994, six pan-European Criteria (Box 3.1) and 27 quantitative indicators for sustainable forest management in Europe were developed to allow an evaluation of countries’ progress in implementing the Helsinki Resolutions H1 and H2 (the latter is entitled “General Guidelines for the Conservation of the Biodiversity of European Forests).

In order to test the suitability of the criteria and indicators (C&I) and to assess the status of implementation of resolutions H1 and H2, a questionnaire was sent to participating countries in September 1994.

The responses were compiled and published in 1996, and proved to be difficult to compare and of variable quality, leading the pan-European Process Liaison Unit (i.e., Secretariat) to comment:

It should be emphasized that the results in appendix 3 represent the first effort to use quantitative data for describing sustainable forest management in Europe. In general, the countries were able to provide more data on the situation in the 1990s than in the 1980s. Data from countries, which are based on specific definitions, assessment methods and use different year (sic) of reference, are essential to indicate trends in individual countries but should not be used for comparisons between countries (MCPFE 1996: 7).

Box 3.1 Pan-European Criteria for Sustainable Forest Management

1. Maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles
2. Maintenance of forest ecosystem health and vitality
3. Maintenance and encouragement of productive functions of forest (wood and non-wood)
4. Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems
5. Maintenance and appropriate enhancement of protective functions in forest management (notably soil and water)
6. Maintenance of other socioeconomic functions and conditions

Source: Loiskekosi (1995: 28-38)

In 1995, at the second Expert Level Follow-up Meeting, a set of 101 descriptive indicators prepared for use in assessing the existence and implementation of policy instruments. In 1996 at the third meeting it was decided to further develop the pan-European criteria and indicators at the subnational and/or forest management unit levels (Granhölm *et al.* 1996: 33). By the fourth Expert-Level Meeting in May 1997, a draft of a document entitled “Proposal for the Pan-European Forest Management Unit Level (FMUL) Guidelines for Sustainable Forest Management” had been prepared (MCPFE 1997). The potential users of the guidelines were listed as forest managers,

subnational organisations (e.g., associations of forest owners), national decision-makers and participants in the international forest dialogue. The link to certification was described as:

The Pan-European FMUL guidelines can also provide a reference tool for the use of certification systems. These Guidelines can be considered as a bridge between governmental decision makers (the policy level), forest managers (practical level) and market requirements. Although certification as such would remain totally independent from the Pan-European Process, and voluntary to the interested parties, the FMUL guidelines can serve as a reference point for the development of specific standards and appropriate threshold and target levels for certification (MCPFE 1997: 6).

However, the two international NGOs present at the expert-level meeting (WWF International and the Global Forest Policy Project) expressed concern that the FMUL guidelines might gradually evolve into certification standards without adequate stakeholder consultation or provisions for independent verification of the status of forest management (Leiner and Elliott 1997).

3.2.3.2 The Montreal Process

The “Montreal Process” is the second post-UNCED C&I initiative. It brings together non-European temperate and boreal countries (including the USA and Canada) and had its first meeting in Geneva in June 1994. At the sixth meeting in Santiago in 1995, the “Santiago Declaration” containing seven criteria (Box 3.2) and 67 indicators was adopted. The Montreal Process differs from the Pan-European Process in several ways. It is less “political”, in that no resolutions have been adopted at the ministerial level and there is an explicit focus on ecosystem management. In addition, participants have taken a cautious approach about links to certification and to development of forest management unit-level guidelines. They have stated that the C&I have been developed for the assessment of progress

towards sustainable management at the national level, and not to assess sustainability at the forest management unit-level, through certification or other measures (Montreal Process 1997a,b).

Box 3.2 The Montreal Process C&I for the Conservation and Sustainable Management of Temperate and Boreal Forests

1. Conservation of biological diversity
2. Maintenance of productive capacity of ecosystems
3. Maintenance of forest ecosystem health and vitality
4. Conservation and maintenance of soil and water resources
5. Maintenance of forest contribution to global carbon cycles
6. Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies
7. Legal, institutional and economic framework for forest conservation and sustainable management

Source: The Montreal Process (1995)

3.2.3.3 Other Criteria and Indicator Processes

The Tarapoto Proposal is an initiative for the development of criteria and indicators in the Amazon Basin. It was developed under the auspices of the Amazonian Co-operation Treaty and began with a workshop held in Tarapoto, Peru, in February 1995. The proposal was subsequently supported by the Ministers of Foreign Affairs of the Treaty at a meeting in December 1995. The basic purpose of the Tarapoto C&I is to encourage compatibility between environmental sustainability and economic development (Granholt *et al.* 1996: 36). The Tarapoto Proposal is at an earlier stage of development than the Montreal and pan-European Processes. It has similar political support to the pan-European Process, but its scope appears to be broader (i.e., less based on the forest sector alone) than either of the other processes. No explicit links to certification have been noted despite the inclusion of management unit level criteria, in addition to national and global ones.

Several other processes have been coordinated by FAO and UNEP. At an expert meeting

organised by FAO and UNEP in Nairobi in November 1995, a set of criteria were proposed for sub-Saharan dry-zone African countries. In 1996 and 1997 FAO and UNEP organised similar meetings in Central America and the Near East, which produced draft sets of regional criteria. The African Timber Organization (ATO) adopted a set of principles, criteria and indicators, which have been tested by CIPHER (Prabhu *et al.* 1996). ATO intends to use these within the framework of a regional certification scheme for its 12 member states.

3.2.3.4 Harmonisation between Criteria and Indicator Processes

Two international meetings have been held to exchange information between these different C&I processes, and to discuss possibilities for collaboration and potential convergence. The first was organised by FAO and ITTO in 1995. At this meeting, the FAO forestry department suggested that despite some differences between the processes, the criteria at the national level in each process include the following elements, which provide a basis for harmonisation:⁸

- 1) extent of forest resources;
- 2) biological diversity;
- 3) health and vitality of forests;
- 4) productive functions;
- 5) protective and environmental functions;
- 6) development and social needs; and
- 7) legal, policy and institutional framework.

The meeting concluded that further exchanges should be encouraged and participation of countries that had not been involved in the C&I processes so far should be facilitated, but it stopped short of agreeing to any harmonisation or convergence of initiatives (FAO/ITTO 1995). This was partly because of the technical difficulties of comparing indicators but also perhaps due to a reluctance of the participants in the initiatives to modify their C&I, or give a leadership role to FAO. There was also disagreement on whether

⁸ Harmonisation is the process of making different criteria and indicators compatible and comparable.

harmonisation was technically feasible between criteria and indicators developed for different forest types.

In August 1996, the Finnish government hosted an Intergovernmental Seminar on Criteria and Indicators for Sustainable Forest Management (ISCI), as a contribution to the work of the IPF (see Section 3.2.3.5) on Criteria and Indicators. The seminar concluded that the role of C&I was as follows:

Criteria and indicators are useful tools, designed ultimately to support the improvement of the quality of forest management as an integral part of the sustainable development of the nations in which they occur. They accomplish this by providing a measure of the state of the forests and their management and thus may be used to assess progress toward the achievement of sustainable forest management (Vähänen and Granholm 1996: 3).

The ISCI seminar called for increased collaboration between different C&I initiatives and recommended that C&I be integrated into national policy frameworks (such as National Forest Programmes) in support of sustainable forest management. Like the FAO/ITTO meeting, it stopped short of calling for convergence between initiatives, and the term “harmonisation” was not used in the recommendations.

3.2.3.5 Criteria and Indicators and Certification

The relationship between criteria and indicators and certification standards has been the subject of some controversy and confusion since UNCED, and is still not fully resolved. Both C&I and certification standards can be placed within a hierarchy of concepts and initiatives relating to sustainable forest management (Granholm *et al.* 1996: 50). The UNCED “Forest Principles” can be placed at the top of this hierarchy because of their global scope and general content. Below them come international-level guidelines like those from ITTO and the four pan-European Resolutions. Then at

the national level there are various sets of guidelines and criteria, often making reference to the “Forest Principles”, ITTO guidelines or other documents. Finally at the management unit level a number of efforts have been made to develop guidelines and performance standards. Both the pan-European Forest Management Unit Guidelines (later renamed Operational Level Guidelines) and certification standards, are designed for use at the forest management unit level. Both can thus be situated in the hierarchy mentioned above. Where they differ is in their content and objectives. C&I are instruments for assessing forest conditions and progress towards sustainable forest management. They are designed to measure trends over time. They do not contain specific performance standards or benchmarks. Certification standards do contain specific benchmarks (unless they are management system standards), because the aim is to assess forest management practices against them.

This hierarchical approach was discussed at the ISCI Seminar, organised by the Finnish Government in 1996, and contributed to reducing some of the confusion. However it became clear at this seminar (and in subsequent discussions at IPF) that two issues were still unresolved.

The first is how to ensure synergy and compatibility between the two processes. It would be unfortunate and confusing if, for example, certification standards at the management unit level left out a criterion that was being reported on at this level through C&I processes. Currently there are no mechanisms to ensure this compatibility. It should be noted however that in two of the case-study countries in this thesis, the certification standards draw explicitly on C&I. The Indonesian standards refer to ITTO guidelines and the Canadian standard refers to the Canadian Council of Forest Ministers C&I, which are very similar to those derived in the Montreal Process. The Indonesian and Canadian standards are discussed in detail in Chapters 4 and 5 respectively. Resolution of the issue of compatibility is largely a technical matter and could be reached by increased coordination between participants in the different processes. A CIFOR (Center for International Forestry Research) project on testing C&I at the forest management unit level may contribute to this (Prabhu *et al.* 1996: 3).

The second issue is more political, and revolves around the role of governments in certification process. One view, expressed by the Danish government representative at ISCI, is that management unit-level criteria and indicators can be derived from national-level C&I (which in turn are linked to the pan-European C&I) and that “Certification, if applied, should be defined within the management unit level criteria and guidelines in order to support sustainable forest management” (Olesen cited in Vähänen and Granholm 1996: 81-2).

This governmental view was based in part on the results of a project commissioned by the Danish Ministry of Environment and Energy with a number of objectives including:

to test how field-relevant guidelines for sustainability can be extracted from National- Level Criteria for Sustainable Forest Management, in particular the 18 Danish criteria and the 6 pan-European criteria...to enable field-level assessment of sustainability (MEE 1996: 2).

At first sight it would appear from the Danish project that management unit-level performance standards for use in certification can be directly derived from national level C&I through a deductive process. This would reduce any confusion between C&I and certification standards and also allow the governments that wished to control the development of certification standards, to do so. NGOs have tended to react negatively to this prospect and, for example, the Greenpeace representative at ISCI responded to the Danish government comments in the following way:

Mr Barclay presented some cautionary notes against governments involving themselves directly in certification and labelling systems, noting that governments have many other more efficient, cost-effective and powerful policy tools at their disposal, and should concentrate on creating an enabling policy environment for

sustainable forest management and leave certification and labelling for the non-governmental sectors (Barclay cited in Vähänen and Granholm 1996: 83).

On closer examination of the Danish project however, it appears that the government assertion that the field-level guideline were “derived” or “translated” from national-level ones can be questioned. The project (coordinated by a consulting company linked to an NGO) involved a steering group and expert panels, which drew on a wide range of actors: NGOs, forest owners, scientists, forest workers and government officials (MEE 1996: 3). From an interview with the project co-ordinator it appears that the process through which the field-level guidelines were developed drew on a range of documents and opinions provided by participants, rather than “deducing” the field-level guidelines from the national ones. In this sense it resembled other processes to develop certification standards (Feilberg 1997).

Irrespective of the process by which the Danish field-level C&I were prepared, the Danish example illustrates one reaction of governments to certification, which is to take an active or even leading role in the development of certification standards. For governments that choose this approach, linking the standards to international C&I is attractive because it gives the appearance of both technical and political legitimacy. Technical legitimacy is provided by the existing content of the international C&I and political legitimacy is provided because governments can less readily be accused of taking unilateral initiatives if they appear to act within an ongoing international process.

In conclusion, C&I and certification standards are both important elements in the ongoing international policy dialogue on forests, although the relationship between them is not always clear. The lack of clarity arises not so much from technical problems of how to link the two approaches, as from competition and conflict between their proponents. There are concerns by some NGO proponents of certification that governments want to use C&I as a means to gain control over certification standards. Meanwhile

there is a parallel concern by some governments that NGOs will seek to use certification to define and to assess sustainable forest management in their countries.

Despite these differences, the ITTO Criteria and Guidelines have been used in the development of Indonesian certification standards and the Montreal C&I have been used in the development of the Canadian Standards Association certification system. These are two examples of the results of deliberations in international fora contributing to the development of certification programmes which will be implemented at the management unit-level. The IPF deliberations on C&I and certification are discussed in the next section.

3.2.4 Ad Hoc Intergovernmental Panel on Forests

The open-ended Ad Hoc Intergovernmental Panel on Forests (IPF) was established in 1995 by the UN Economic and Social Council, on the recommendation of the Commission on Sustainable Development (CSD) to pursue consensus and formulate options for actions to implement the UNCED “Forest Principles” and Chapter 11 of “Agenda 21”. IPF’s work was divided into five “programme areas”:

- I. Implementation of UNCED decisions related to forests at the national and international level, including an examination of sectoral and cross-sectoral linkages
- II. International cooperation in financial assistance and technology transfer
- III. Scientific research, forest assessment and development of criteria and indicators for sustainable forest management
- IV. Trade and environment relating to forest products and services
- V. International organizations, multilateral institutions and instruments including appropriate legal mechanisms (UNESCO 1997a: paragraph 5)

Four sessions of IPF and a number of intersessional meetings were organised between

1995 and 1997. The discussion below concentrates on programme areas III and IV, which were discussed at the second session in March 1996 and at the third session in September 1996. It should be noted that discussions under programme element V did not lead to any definitive consensus on the desirability of a global forest convention, although the number of governments supporting the concept appeared to have increased since UNCED (UNESCO 1997a: paragraphs 130-133).

IPF’s discussions on Criteria and Indicators were largely based on the preparatory work of the intersessional ISCI meeting, which was reviewed in the previous section. The conclusions of IPF on this subject can be summarised as: Criteria and Indicators were recognised as a useful tool to assess trends in forest conditions, report on the state of forests and for achieving sustainable forest management. They were seen as providing a conceptual framework for policy formulation and evaluation. The need for indicators covering social issues was stressed. While the IPF agreed on the need for common definitions of the concepts used in Criteria and Indicators and compatible assessment methodologies, there was no agreement on the desirability of establishing a core set of C&I for use at the global level. The IPF recommended that countries and regions, which had not been involved in regional and international processes, become involved as soon as possible. All countries were encouraged to develop national-level C&I within the existing international frameworks (UNESCO 1997a: paragraphs 95-105).

The panel reached the following conclusion on the relationship between Criteria and Indicators and certification:

While recognizing that national-level criteria and indicators may play an important role in clarifying issues related to forest certification and the labelling of forest products, the Panel emphasized that the development of criteria and indicators is intended primarily for promoting and monitoring sustainable forest management, and not for imposing certification of labelling schemes for forest products. Criteria and indicators are not performance

standards for certifying management at any level and should not be made a basis for restriction of trade (UNESC 1997a: paragraph 98).

3.2.4.1 Intergovernmental Panel on Forests Intersessional Conferences on Certification

The discussions on certification under programme area IV were informed by three preparatory intersessional conferences. The first was organised by the faculties of forestry of the University of British Columbia and the Agricultural University of Malaysia, and was held in Kuala Lumpur from 13 to 16 May 1997, with the support of timber industry and governmental funding sources in Canada and Malaysia along with the Forest Stewardship Council (FSC). There were 90 participants from NGOs, universities, government agencies and international organisations from 40 countries. The conference focussed on biological, social and ecological concepts and indicators, but also discussed national and international institutional arrangements for certification. Twelve papers were prepared on the conference topics and were discussed in small groups. These papers were intended to summarise the “state-of-the-art” in the relevant fields and were published in the proceedings (UBC/UPM 1997). The format of the conference was not designed to produce final recommendations or resolutions. However, the co-chairs noted in their synthesis that three recommendations to those involved in the certification debate could be extracted from the conference. They also made a statement on credibility (Box 3.3).

The second conference was organised by the government of Australia in Brisbane from 26 to 31 May 1996. It was attended by 250 participants from 59 countries. NGOs, research institutions, governments, international organisations and the private sector were represented. The conference had two objectives: to advance international dialogue on certification and labelling as a means of achieving sustainable forest management, and to contribute to the work of IPF. The conference was organised in a series of sessions in which papers were presented.

Box 3.3 Recommendations from the Co-Chairs of the UBC/UPM Certification Conference, May 1996

Do not spend more time attempting to identify criteria and indicators applicable at the stand or landscape level that are universal or trying to define common or minimum sets. There are scientific, economic, social and political reasons for why this is both undesirable and operationally infeasible.

Do not continue to debate whether a “management system-based or performance-based certification system is best. There are scientific reasons for why a combination of the two approaches is needed until considerably more knowledge is acquired on forest ecosystem dynamics.

Do not attempt to reach agreement on the design of a single best, internationally recognized system for certification. There is a political and economic (market) justification for having multiple certificates which are equivalent.

We return to our theme of credibility which we see as the key, overarching issue for the moment. Gaining and sustaining the confidence of consumers and producers alike is absolutely critical, and this can only be done if claims are genuine.

Source: Howard and Majid (1996: 17)

Several sessions also involved case studies of national experiences in the development and implementation of certification systems. In comparison to the UBC/UPM conference the Brisbane meeting appears to have been less concerned with the technical and scientific aspects of certification indicators and more focussed on the practical aspects of implementing certification schemes. Fifty-two papers were delivered and are summarised in the abstracts of the conference (Brisbane 1996a). A final conference resolution was adopted in plenary session (Box 3.4).

The third intersessional meeting was organised by the German and Indonesian governments in Bonn from 12 to 16 August 1996. It was entitled “International Experts Working Group Meeting on Trade, Labelling of Forest Products and Certification of Sustainable Forest Management”. The objective was to contribute to

Box 3.4 Resolution from the Brisbane Conference on Certification, May 1996

Based on its workshop discussions in which all experts were able to participate... the Conference came to the following Resolutions and recommends their appropriate consideration by the IPF.

1. Sustainable forest management is the main goal shared by all participants.
2. Certification and labelling are potentially useful tools among many others to promote sustainable forest management.
3. The efficacy of certification and labelling for promoting sustainable forest management needs to be further evaluated.
4. Approaches to sustainable forest management, including certification and labelling, will depend on local, regional and national conditions, including forest type, land tenure and ownership patterns, systems of government, involvement of stakeholders including forest owners, community, indigenous people, business, labour, NGOs, and other interested parties.
5. Both performance standards and environmental management systems are complementary and important components for the assessment of sustainable forest management.
6. There is currently insufficient information to determine the extent of market demand for certified products.
7. There are a number of issues that merit further consideration and questions that need to be further explored with respect to certification and labelling, including: costs and benefits; market implications, the scientific basis for defining and measuring sustainable forest management; governance and credibility of certification schemes; the roles of governments and international institutions/ organizations; consistency with international agreements; harmonization/mutual recognition of/between schemes; the trade impacts of certification and labelling; and the role of environmental, economic and social objectives in achieving sustainable forest management.

Source: Brisbane (1996b: 3-4)

IPF's work on examining the potential roles of certification and labelling as tools to promote sustainable forest management. Seventy participants, considered by the organisers to be experts on certification, were invited from 37 countries, international organisations and NGOs. The working group divided into four sub-groups: impact of labelling timber from sustainable forest management on demand; certification/labelling within the framework of free trade; impacts of certification on sustainable forest management; and lessons learned from existing schemes. Twenty papers were commissioned for the meeting and served as a basis for deliberations. In general, the focus of the meeting was more on trade and economic issues than the two previous meetings. At the end of the meeting a series of conclusions was adopted by the participants for submission to IPF (Box 3.5).

3.2.4.2 Conclusions of the Intergovernmental Panel on Forests on Certification

The results of the Bonn and Brisbane meetings were presented to the IPF at its third session in September 1996. The UBC/UPM meeting was not referred to in IPF's deliberations (nor listed as a formal intersessional meeting (UNESC 1997a: Annex 1)) in part because it was organised by universities rather than governments. In addition, unlike the other two, the UBC/UPM meeting did not adopt any formal recommendations for IPF. The discussions on certification were lengthy and revolved largely around what role, if any, governments should play in relation to certification. No consensus was reached on this point and the IPF conclusions on certification (Box 3.6) were generally cautious, and closer to the recommendations of the Brisbane meeting than to those from Bonn. It should be noted however that the idea of country-level certification, which had originally been proposed in a report to ITTO (LEEC 1993) and which was mentioned in an IPF secretariat background paper (UNESC 1996a), did not gain significant support and was not mentioned in the IPF recommendations on certification.

Box 3.5 Conclusions of the Bonn Expert Meeting, August 1996

Recognizing that there is limited experience of certification as one of the possible tools which can potentially contribute to sustainable forest management and improved market access, IPF may wish to consider that there is nonetheless evidences to support its further examination.

IPF may wish to stimulate the policy dialogue by focussing on the international, regional and national levels with respect to the following:

- international accreditation body(ies);
- mutual recognition, harmonization and/or co-ordination of certification systems;
- mechanisms which are capable of resolving conflicts and conflicts of interest and so assure credibility of schemes;
- the special needs of small forest owners and community-based forest activities and their integration into forest certification schemes; and
- increased international development cooperation for:
 - improved forest management to meet certification standards;
 - human resource development in certification issues, including policy development, standard-setting and training of competent local assessors for forest management;
 - market promotion of certified forest products;
 - exchange of experiences and information;
 - encouragement and support of weaker parties interested in active involvement in certification;
 - establishing consultation processes that seek to involve all interested parties; and
 - assessment and monitoring, including chain-of-custody tracking.

Noting that processes seeking to involve all interested parties in the development of voluntary certification schemes enhance the effectiveness and credibility of such schemes, the IPF may wish to consider the role of governments in relation to market access and the development, implementation, promotion, harmonization, and mutual recognition of certification and labelling schemes.

Recognizing that voluntary certification may have impacts at and beyond the forest unit being certified

(e.g., international), the IPF may wish to note the need to monitor practical experience of certification.

Wherever possible, voluntary certification schemes should take account of C&I frameworks at national, regional and international levels and the need to maintain relevance and practicability. At the same time, this may enhance the credibility of such schemes.

Recognizing the need to identify the preconditions required so that certification and labelling schemes can be seen to be in alignment with the principles of WTO, IPF may wish to bring to the attention of the WTO the potential positive relationship between sustainable forest management and voluntary certification and labelling schemes. There is also a possible need to clarify the relationship between WTO provisions and such voluntary systems.

Recognizing the need to minimize tension between certification schemes and open trade and competition, IPF should highlight the principle [sic] concepts of the Agreement on Technical barriers to Trade, which may be of relevance to proposals for certification and labelling and which include:

- non-discriminatory treatment
- avoidance of unnecessary barriers to trade
- transparency
- encouragement to use international standards and to develop harmonization
- encouragement for the acceptance of "equivalent" standards and mutual recognition.

In addition, the Working Group identified the following (non-exhaustive) criteria:

- open access and non-discrimination in respect of all types of forest, forest owners, managers and operators proportionality: not more trade-restrictive than necessary to achieve the environmental objectives
- credibility
- non-deceptive
- cost-effective
- a participatory process that seeks to involve all interested parties
- implementable and practical
- related to sustainable forest management.

Box 3.6 IPF Conclusions on Certification: Programme Area IV “Trade and Environment in Relation to Forest Products and Services”

113. The Panel recognized that voluntary certification and labelling schemes are among the many potentially useful tools that can be employed to promote the sustainable management of forests. In view of potential proliferation of schemes, there is a need to promote comparability and avoid duplication among various certification and labelling schemes.

114. The Panel accepted that Governments have a critical role in promoting effective sustainable forest management systems. However, because certification has developed thus far as a voluntary private initiative, different views expressed on the roles of Governments and intergovernmental institutions in the development or regulation of certification systems require further clarification. In considering possible roles for governments, bearing in mind the fact that certification is a market driven process, distinctions should be made between the roles of governments as regulators, as promoters of public policy and, in some countries, as forest owners. Governments, however, have a role in encouraging transparency, full participation of interested parties, non-discrimination and open access to voluntary certification schemes.

115. International efforts should focus on ensuring that existing and new certification and labelling schemes are open and non-discriminatory in respect of types of forests or forest products, forest owners, managers and operators; are not used as a form of disguised protectionism, and are not in conflict with international obligations.

International attention to the issues of certification of forest management and labelling of forest products should be put into perspective. To date, only a small proportion of the global trade in forest products and a small area of the world's forests are influenced by these schemes. Because of inadequate information, and relatively few real world experiences, it is too early to assess objectively their full potential in promoting sustainable forest management. More studies and information are required to clarify various uncertainties including: the impacts of certification on forest enterprises and markets, the competitiveness of forest products, the economic and non-economic costs and benefits; the demand for certified products; the feasibility and credibility of certification at different levels; the use of criteria and indicators; the governance and credibility of certification schemes in the context of consistency with international agreements; and the role of Government as a regulator and in some countries also as a resource owner.

Source: UNESCO (1997a)

The IPF's report was endorsed by the CSD at its fifth meeting in June 1997 and at the special session of the UN General Assembly held in New York in June 1997, five years after UNCED, the decision was taken to create an ad hoc open-ended Intergovernmental Forum on Forests (IFF).

**3.2.4.3 Follow-up to the Intergovernmental Panel on Forests:
The Intergovernmental Forum on Forest**

The Intergovernmental Forum on Forest (IFF) was charged with four tasks:

- 1) promoting and facilitating the implementation of the IPF's proposals for action;
- 2) reviewing and reporting on progress in the management, conservation and sustainable development of forests;

- 3) considering matters left pending by the programme elements of IPF, in particular trade and environment in relation to forest products and services, transfer of technology and the need for financial resources; and
- 4) The forum should also identify the possible elements of and work towards consensus for international arrangements and mechanisms, for example, a legally binding instrument on all types of forests. (UNGAS 1997: paragraph 33).

The mandate of the forum appears to have marked a step forward for discussions on a global forest convention, and also meant that the IFF would discuss certification. At its first meeting in October 1997, the IFF decided that on trade and environment issues it would act as follows:

Consider matters left pending [by IPF] on trade and environment. Analyse the mutually supportive roles that international trade and sustainable forest management perform and, in that context, issues related to non-discriminatory international forest products from all types of forests, including the role that tariff and non-tariff barriers may perform in relation to sustainable forest management, certification issues where relevant, and improved market access, taking into account the needs of developing, in particular the least developed countries (UNESCO 1997b: 5).

In view of this, it can be anticipated that certification will continue to feature on the agenda of international forest policy discussions in the IFF.

3.2.4.4 Discussion and Conclusions on Certification and the Intergovernmental Panel on Forests

An analysis of the reports of the intersessional meetings, and the IPF report itself, shows that the credibility of certification schemes was mentioned frequently. In the co-chairs' synthesis of the UBC/UPM conference, credibility with consumers and producers was identified as the key issue of the moment (Howard and Majid 1996: 17). It was mentioned once in the Brisbane resolution, three times in the Bonn resolution and twice in the IPF report. This is not surprising because it is unlikely that certification can be effective if it is not seen as credible by the relevant actors. Credibility was also listed as one of the requirements of a viable certification system by Baharuddin and Simula in their 1994 report to ITTO. These authors identified three elements of credibility as being important: transparency; competence and credibility of certifiers; and control and monitoring of certification systems. They considered the last to be the most important.

The fundamental question in credibility is, however, what minimum degree and quality of external monitoring and control will be required to make certification schemes

accepted and recognized by consumers. Some element of external monitoring and control appears to be inevitable (Baharuddin and Simula 1994: 85)

The first two elements do not appear to have been controversial in the intersessional meetings of IPF. "Transparency" is mentioned directly and indirectly several times in the reports, and it can be taken for granted that if certifiers are not competent, certification will not be credible. Indeed, in 1996 some criticisms were raised of both FSC and certification because of an alleged lack of credibility of SmartWood, an FSC accredited certifier (Centeno 1996).

However the third element of "external monitoring", which is linked to "independence from vested interests", another criterion listed by Baharuddin and Simula (1996: 55-6), is not mentioned in the conclusions of the conferences or IPF. At first sight it appears strange that while credibility is stressed as an objective, a key element of credibility appears to have been neglected.

One explanation for this can be found in paragraph 114 of the IPF report which refers to the possible roles of governments, a subject on which the Panel was not able to reach consensus. The Panel noted that distinctions should be made between the roles of governments as regulators, as promoters of public policy and, in some countries, as forest owners. Certification has been seen by some government forest services as either unnecessary or as a potential threat to their role in managing (or overseeing the management of) forests.

In one of the papers given at the UBC/UPM conference, the situation was described in the following way:

A number of national forest services believe that their monitoring of forest practices is adequate and credible. They undertake monitoring sufficient in kind and intensity to satisfy legislation and the political administration. They argue that this should be sufficient to satisfy all other stakeholders. Currently, the Forestry Commission of Great Britain does not

allow third-party independent certification bodies to have access to information which would enable them to audit forests owned and managed by the forest enterprise wing of the FCGB (Palmer *et al.* 1996: 99).

It is not surprising that governments who are considering being directly involved in implementing certification programmes may wish to leave room for this option in the IPF resolutions by leaving out reference to “independence” and “external monitoring” as criteria for certification systems. Whether the objective of credibility can be achieved in the potential absence of one of its key elements is unclear at this stage. It should be noted that this issue is not confined to the role of governments in certification. The independence of the FSC has also been questioned on various counts as discussed in Chapter 1.

Another aspect of the conclusions of the IPF and the intersessional meetings, particularly from Bonn, is the emphasis on the need to avoid certification becoming a trade barrier. The “Forest Principles” endorsed the concept of free trade in forest products and rejected unilateral measures to restrict or ban international trade in timber. In 1992 these provisions appear to have been directed largely at national governments (for example, the Austrian tropical timber import law mentioned in Section 3.2.1). It is interesting to note that by 1996 a voluntary instrument such as certification was seen as potentially trade-restrictive. It is argued in the following sections that this suggests that trade and environment linkages and the World Trade Organization (WTO), gained in prominence in the international forest regime between 1992 and 1996. The links between the development of certification standards in Indonesia and the ITTO criteria, and between the Canadian Standards Association standard and the Montreal criteria have already been mentioned as an example of direct input from international discussions on Criteria and Indicators to certification standards. However, the linkage between IPF discussions on certification and certification programmes in 1996 and 1997 is less clear. The ITTO criteria were published in 1992 and the Canadian Council of Forest Ministers adopted Criteria and Indicators

very similar to those presented in the Montreal Process documents in 1995, whereas the IPF only began work in 1996. The IPF and its intersessional meetings certainly influenced and perhaps even framed the international discourse on certification after 1996, but certification was proceeding on the ground without waiting for approval of governments or endorsement by IPF, and the direct influence of these discussions on certification programmes is unclear. The IPF conclusions on certification implicitly recognise this by characterising certification as an ongoing voluntary private initiative.

From a theoretical perspective, the post-UNCED discussions on C&I and certification are interesting and suggest several research avenues which go beyond the scope of this thesis. First, the way in which certification schemes developed has involved activities at multiple levels (see Box 3.7) suggesting a more complex situation than provided for in Putnam’s “two-level game” model (Putnam 1988). It would be useful to use Putnam’s model to study this situation in detail to see whether there is any need to modify the model. It should be noted that in this case the complexity is increased by the diversity of actors, which is not limited to governments but includes intergovernmental organisations, NGOs and the private sector. These actors are often involved at multiple levels.

A second avenue of enquiry would be to use the concept of epistemic communities to study the international C&I processes, in which it appears that a relatively limited number of foresters played a key role in terms of providing the substance of the C&I. A study of how the C&I evolved through various drafts and a review of the interrelationships between the various actors in the process could provide an interesting application of the epistemic communities concept. It may also throw some light on the complex interrelationships between dialogue on C&I, the Global Forest Convention and certification.

Third, the international policy dialogue from 1990 to 1997 on the Global Forest Convention could provide a useful case study for the application of the Advocacy Coalition framework at the international level. Records of

Box 3.7 Levels Involved in C&I and Certification

Level	Example of Activities
Management unit	Certification assessments Consultation with local stakeholders on forest management unit guidelines (e.g., Danish project) Consultation with local stakeholders on performance standards for certification (CSA system)
Sub-national units	Development of FSC regional standards for certification (e.g., USA)
National level	Development of FSC standards (e.g., Sweden) Formulation and reporting on national level Criteria and Indicators (e.g., Denmark) Development of national certification systems (e.g., UK– proposed, Canada) Development of governmental positions on certification, Criteria and Indicators, etc.
Regional	Criteria and Indicators initiatives (e.g., pan-European Process)
International	Criteria and Indicators (e.g., The Montreal Process) Policy fora (e.g., IPF, IFF) FSC Principles and Criteria

the UNCED preparatory meetings and the IPF sessions suggest that pro and anti-convention coalitions could be identified. Several governments, such as Malaysia and the USA, changed their official position on the convention over this period. Was this an example of a change in secondary or core beliefs? Can the ACF be applied to study an international policy domain? These are all interesting questions which other researchers may wish to examine.

3.3 ECOLABELLING AND INTERNATIONAL TRADE

The World Trade Organization is an example of a comprehensive international regime which deals with a multitude of trade-related issues including environmental questions (Humphreys 1996a). Whenever a certified piece of timber is traded between any of the 132 member states of the World Trade Organization, it may come within the scope of WTO rules. Thus certification is influenced both by the established international trade regime as well as by the emerging international forest regime.

To understand the implications of this, it is useful to look at certification within the broader context of ecolabelling. It will be recalled from Chapter 1 that certification can be seen as a form of ecolabelling. Over the last 20 years, increased attention has been paid to ecolabelling by governments, NGOs, consumer organisations and the private sector in Organisation for Economic Co-operation and Development countries (OECD 1991a: 11; EPA 1993: 1). This trend has been interpreted as a sign of growing concern worldwide about the sustainability of development and on trade's impact on the environment (Baharuddin and Simula 1994: 13). Ecolabelling can be viewed from several perspectives. In Chapter 1 it was discussed as an economic instrument for environmental protection, drawing on the work of OECD in this area. Here it will be examined as a trade policy instrument with environmental objectives.

WTO rules are based on a set of principles embodied in the General Agreement on Tariffs and Trade (GATT) which was originally adopted in 1947. These were gradually modified through a series of seven “rounds” of trade negotiations

culminating with the completion of the Uruguay Round in 1994, which led to the creation of the WTO. The most relevant principles for the purposes of ecolabels include (Vaughan 1996: 3-4):

- *Most-Favoured Nation (MFN)*: GATT Article I states that any trade advantage given by one GATT member nation to another country must be granted to all GATT member nations.
- Article 1 also refers to *like products*,⁹ and several GATT dispute settlement panels have concluded that MFN and other GATT provisions do not allow distinctions to be made by members between like products, on non-product-based criteria. These include aspects of the process and production methods (PPM) by which the products were produced (Cook *et al.* 1997: 29). In the case of timber, the PPM is forest management so GATT rules would not allow a country to restrict imports of timber on the basis of forest management practices in the exporting country.
- *National treatment* is covered by GATT Article III which requires that any imported goods be accorded the same treatment as domestically produced goods in terms of matters under government jurisdiction such as taxes and regulations.
- *Quantitative restrictions*: Article XI generally bans the use of import or export prohibitions or restrictions, although some limited exceptions are allowed. This article was invoked by the European Community against Indonesia's log export ban, as discussed in Chapter 4.
- *General Exceptions* to GATT rules are provided for in Article XX which allows measures for the protection of human, animal or plant life or health and for the conservation of natural resources.

In 1991, a GATT panel was called to rule on a complaint against the US by Mexico. The subject of the dispute was both US legislation and a voluntary governmental ecolabel on tuna fish tins called "Dolphin Safe". The US Marine Mammal Protection Act prohibits the import of tuna from the

Pacific if it is caught by methods that kill too many dolphins. The ecolabel was designed to reassure consumers that the tuna was caught in a way that minimised accidental taking of dolphins. The panel concluded that Marine Mammal Protection Act constituted "extraterritorial" protection for dolphins (i.e., outside US territory), and was thus not compatible with GATT article XX. However, the ecolabelling scheme did not violate GATT provisions because it was voluntary and did not discriminate on the basis of the country of origin of the product. Thus, the MFN principle and National Treatment principles were respected (Droogsmas *et al.* 1994: 25-38; Cook *et al.* 1997: 30-1). It should be noted that this panel decision was reached before the conclusion of the Uruguay Round and the creation of the WTO, so its value as a precedent is uncertain. Several previous GATT panels have concluded that the MFN and NT principles do not allow distinctions to be made between like products on the basis of the PPMs by which those products were produced (Cook *et al.* 1997: 29).

Another example of an ecolabel being challenged under GATT rules was the 1992 Austrian law, which made labelling of imported tropical timber obligatory in Austria. Under pressure from tropical countries and the threat of a formal complaint to GATT, the Austrian government modified the law to remove the provision for obligatory labelling (Rametsteiner 1994: 1).

During the Uruguay Round, some developing countries argued that product labelling requirements, including ecolabelling, unfairly discriminated against their exports. A United Nations Conference on Trade and Development (UNCTAD) study on this issue came to the following conclusions:

In principle, eco-labelling programmes are voluntary and open to both domestic and foreign suppliers, including those from developing countries. However, domestic producers can more easily influence the development and implementation of

⁹"Like products" are generally synonymous with "competing products" in GATT and WTO usage (Vaughan 1996).

national ecolabelling schemes. For example, domestic producers may influence the selection of new product categories which may be eligible for labelling, thus not including (by default) product categories which are of interest to foreign suppliers, particularly those from developing countries. The selection of criteria and thresholds may also focus on narrow domestic concerns and policies, thus not giving due consideration to other environmentally-friendly processes applicable in developing countries. Lastly, methods of plant inspection or testing may be difficult or expensive for foreign firms, particularly from developing countries. Thus ecolabelling may act as a defacto barrier to trade (Jha and Zarilli 1994: 64).

One example of this situation is provided by the criteria used in the EU ecolabel for paper. According to Brazilian pulp and paper manufacturers, these criteria discriminate against Brazilian exports and in favour of EU producers, because of the requirements concerning recycled content, and the definition of sustainable forest management which is used (da Motta Veiga *et al.* 1994). The problem extends beyond the forest sector; UNCTAD has estimated that 45% of EU imports in product categories that have been identified for ecolabelling, originate in developing countries (UNCTAD 1995). The completion of the Uruguay Round in 1994 and the creation of the WTO were accompanied by the signature of the Technical Barriers to Trade (TBT) agreement (Uruguay Round 1994: 117-37), which includes a number of measures to address these issues.

The TBT has two main objectives. First, to ensure that WTO members do not use technical regulations and standards as disguised forms of protectionism. Second, to harmonise these regulations and standards to facilitate international trade. The TBT covers both “technical regulations”, which establish mandatory requirements for products or related process and production methods (PPMs), and “standards”, which establish voluntary PPM requirements. The terms “technical regulation” and “standard” apply

not only to PPMs but also to terminology, symbols, packaging and labelling requirements (Uruguay Round 1994: 132).

The TBT agreement applies directly to government standard-setting bodies when they establish mandatory “technical regulations”. In the case of private, voluntary initiatives, such as ecolabelling implemented by NGOs, Article 3 of the TBT requires that WTO member governments shall “Take such reasonable measures as may be available to them to ensure compliance” (Uruguay Round 1994: 120).

The implications of this provision are still unclear, but according to a report prepared by the Center for International Environmental Law (CIEL):

In the absence of more definitive guidance, and given the growing opposition to ecolabelling in the international trade community, it seems possible that a fairly rigorous standard will be applied. That means that national governments could be required to take every constitutionally available measure to ensure that private standardizing bodies abide by the TBT Agreement and its Code of Good Practice (Cook *et al.* 1997: 25).

The general requirements of the TBT for voluntary standards are specified in the “Code of Good Practice for the Preparation, Adoption and Application of Standards” (Uruguay Round 1994, Annex 3: 135-137). They can be summarised as follows:

- Standards must not constitute unnecessary barriers to trade.
- National standards and conformity assessment procedures¹⁰ should be developed through a national consensus process.
- National standards should be harmonised with international ones where possible.

¹⁰ Conformity assessment procedures are used for determining whether standards are met in a particular instance.

- Standards development should be made transparent by ensuring that advance knowledge of standards and conformity assessment procedures is available to WTO members. A procedure for collecting and considering comments from any interested parties on draft standards must be set up. Each member is obliged to establish a national enquiry point, which is intended to respond to all reasonable enquiries from members concerning standards or procedures.
- Performance-related standards are to be preferred to those focussing on design or descriptive characteristics.

Two conclusions can be drawn from this discussion. First, forest certification schemes are likely to fall under the provisions of the TBT's code of Good Practice, even if it is unclear how far governments will be willing, or able, to go in promoting this. The developers of certification standards and conformity assessment procedures might be well advised to follow the provisions of the Code, particularly as some analysts have suggested that programmes such as the FSC are already consistent with the TBT's provisions (Michaelowa 1996; Cook *et al.* 1997: 45).

Second, until the WTO's Committee on Trade and the Environment (CTE) proposes a position on whether non-product related PPM standards for ecolabels are in conflict with WTO rules, there will be some uncertainty about the "WTO-compatibility" of forest certification. According to CIEL, the CTE was unable to come to a resolution on this issue in the first years of its work from 1994 to 1996, because of differences of opinion between member states, with developing countries being almost uniformly opposed to the acceptance of ecolabels based on non-product related PPM standards (WTO/CTE 1996; Cook *et al.* 1997: 31).

Another related issue being considered by the CTE is how WTO rules relate to existing Multilateral Environmental Agreements (MEAs) such as Convention on Trade in Endangered Species (CITES), which has explicit provisions for restricting or banning trade on the basis of non-product related criteria. A number of NGOs have

asked WTO to collaborate on an equal footing with other MEAs and multilateral institutions on this matter (WWF 1994). The European Commission has proposed an amendment to Article XX which would allow trade measures to be taken pursuant to an MEA, subject to certain conditions including the transboundary or global nature of the environmental problem (House of Commons 1996: paragraph 179-187). By the end of 1997, the CTE had not reached consensus on how trade-related measures in MEAs are connected to WTO rules.

3.4 PRIVATE SECTOR INITIATIVES

Most of the discussion in this chapter has focussed on the activities of governments and NGOs. However, in the last decade the private sector has taken an increasingly active role in national and international policy debates and activities concerning forest policy. Key private sector activities related to certification are discussed in this section under the headings of environmental marketing and international policy.

3.4.1 Environmental Marketing

Since the late 1980s, there has been an increase in the number of consumer products sold in OECD countries which make environmental claims such as "recycled" or "organic" (AGTF 1990: 5; OECD 1991a: 11; EPA 1993: 1). "Environmental marketing" can include such product claims as well as corporate-related claims concerning the environment. Environmental marketing may be "first-party", in which the company itself makes the claim, or "third-party", in which the claim is made by an independent inspection body. Ecolabels, according to the definition presented and used in this thesis, fit into the category of voluntary, third-party environmental marketing instruments.

In the absence of a clear legal framework defining terms such as "natural" and "organic", the growth of environmental marketing, particularly in the USA, rapidly led to consumer confusion (Davis 1992). The consequent potential for litigation for misleading advertising prompted some major US corporations, including Procter and Gamble, to cease making first-party

environmental claims in 1992 (EPA 1993: 6). It is possible that US consumers might view third-party ecolabels more favourably. Industry in the USA has however expressed some concerns about letting an independent third party set standards for industry to follow (EPA 1993: 7). Meanwhile, the interest in third-party ecolabels has grown in other OECD countries, and by 1993 there were 13 seal-of-approval programmes in operation in 21 countries. Most of these are operated by government, or controlled by an independent body with government oversight.

It has been suggested that one of the factors behind the growth of environmental marketing is innovative corporations, who wish to “position” themselves in the minds of environmentally aware consumers as “responsible corporate citizens” (Pattie 1994; Capra and Pauli 1995: 12). Corporations have used various forms of “cause-related marketing” (such as philanthropic donations, corporate sponsorships, etc.) for decades and it is not surprising that with the prominence of environmental issues many have turned to environmental marketing as well (Varadarajan and Menon 1988).

The growth of forest certification programmes has probably been encouraged by this trend just as it has by increased governmental interest in the use of economic instruments for environmental protection. One difference between the two is that the impetus behind the use of economic instruments came largely from governments, economists and international institutions such as OECD. The private sector and consumers have been more influential in the development of environmental marketing.

Another difference is that, whereas the use of indirect economic incentives such as certification for environmental purposes is a relatively new concept, two of the forest certification programmes which were operational by 1993 were started by organisations that had originally been involved in certification of organic agriculture. In the case of the Soil Association, this organic certification programme had been operating for decades. It was a relatively minor step for these certifiers to move from certification in agriculture to forestry, and the forestry

certification programmes could draw on considerable institutional and technical experience.

It should be noted however, that despite the similarities between certification in forestry and agriculture, there are also significant differences. It has been suggested, for example, that certification in agriculture generally aims at a limited number of farmers who implement practices that have been developed and tested over decades. On the other hand, certification in forestry is less based on existing practices than on an attempt to put pressure on “mainstream” producers to improve the management of their forests (Dudley *et al.* 1997).

3.4.2 Private Sector International Policy Activities

Many examples can be cited of the increased national and international policy activities of the private sector in international forest policy fora in the 1990s. The activities of retailers and other wood users in “buyers’ groups” coordinated by WWF and other NGOs has already been mentioned in Chapter 1. The role of the Business Council for Sustainable Development (later renamed World Business Council for Sustainable Development) in encouraging ISO to develop the ISO 14000 series of standards on environmental management has also been discussed. In Section 3.2.1. of this chapter, it was mentioned that timber trade organisations played an active policy role in the deliberations of the ITTO. This has been mentioned as an example of the increased role of the private sector in the UN system in the 1990s, following its increased prominence in national policy fora in many developed countries in the 1980s, in line with neoliberal ideologies (Lee *et al.* 1998). In 1996, the International Institute for Environment and Development published a detailed study (IIED 1996) on the social and environmental impact of the pulp and paper industry on behalf of the World Business Council for Sustainable Development.

It can be concluded that by 1997 the large international forestry and pulp and paper companies were well informed about international policy discussions relating to forest certification and were in a position to intervene effectively in

intergovernmental and other fora to promote their objectives. The development of ISO's activities in relation to forest certification, which were discussed in Chapter 1, can be seen in this context.

3.5 THE STATUS OF FOREST CERTIFICATION IN 1997: A SUMMARY

Whereas forest certification was only a concept in 1990, by 1997 over 3 million ha of forests had been certified by FSC-accredited certifiers in 13 countries. In addition, at least five forest operations in four countries had been certified under ISO 14001. National certification schemes were either operational or in the last stages of testing in Brazil, Canada, Finland and Indonesia, and at earlier stages of development in more than 10 other countries. (See Annex 3.2 for an overview of the status of certification around the world in 1997.)

At the international policy level, certification had been the subject of deliberations, which were sometimes controversial at IPF and other meetings and conferences, leading some analysts to write:

Certification and the associated issue of labelling are among the most topical and controversial subjects in forestry at the present time (FAO 1997a).

The world-wide movement on certification of forest management is undoubtedly one of the most important and controversial issues in the forest sector today (Howard and Majid 1996: i).

The ITTO working group meeting on certification in May 1994 provided a first opportunity to review and compare government's positions on certification (Annex 3.1 in this chapter). By 1997, discussions on certification had become more complex. Two kinds of private, voluntary certification programmes had evolved (performance and system-based), and in several countries, certification programmes with significant government involvement were under development. Thus it was no longer a question

of supporting or opposing certification in general but taking a position on two or even three different approaches.

The IPF conclusions on certification showed that, while there was governmental recognition that certification had emerged as a private, voluntary initiative, there were divergences of views among governments on the role they should play in the development and regulation of certification systems. These divergences stem in part from the different roles of governments as regulators, promoters of public policy and in some country as forest owners in different countries.

However, government attitudes towards certification cannot be explained in terms of these roles alone. For example, in Canada, Ghana, Malaysia and the USA the government owns significant portions of the nation's forests, yet the approach to certification has been different in each country. In Malaysia and Ghana, the government has played a major role in shaping the emerging national certification systems. The Malaysian scheme is performance-based and draws on ITTO criteria. The Ghanaian scheme draws on various international C&I and also has a systems component. (Baharuddin and Simula 1997: 49, 81). In Canada, the provincial governments (the main forest owners) have participated in, rather than shaped, the national certification scheme (which is system-based) developed by the Canadian Standards Association (Mercier 1996). In the USA, no national-level certification programme has evolved. A comparison of government statements made by the ITTO working group in 1994 and at the second IPF meeting in 1996 suggests that the US government position on certification became less positive in the two years between the meetings (IISD 1996).

In addition to the role of governments in the forest sector, another factor that can influence their position on certification is the position taken by other actors. For example, it is likely that the US government has been influenced by the negative attitude to certification (especially performance-based certification) of the US forest products industry.

By 1997, several loose coalitions of actors could be observed in certification discussions in national and international forest policy processes. The first coalition¹¹ included international NGOs such as Greenpeace, FOE and WWF, which were supportive of performance-based certification in general and the FSC in particular (FME 1996). They characterised certification as a voluntary, private initiative in support of sustainable forest management (WWF 1997). It should be noted that this support was not unconditional, and the same NGOs had also expressed some concerns about the credibility and transparency of FSC (e.g., Fanzeres 1996)

A second coalition of more “activist” NGO actors (such as the German NGO Rettet den Regenwald) had a position that has been characterised as:

Other environmental NGOs, however believe that commoditization and corporate approaches to forests are intrinsically anti-forest and anti-forest peoples-because of the power structure of big business and prevailing short-term profit-seeking attitudes. They believe that certification will be co-opted by the prevalent economic interests; although some note that certification may work if it is part of a regulatory-rather than purely voluntary-approach (Upton and Bass 1995: 148).

A third coalition supported a management systems approach to certification in which the forest operations to be certified set their own performance standards, sometimes after a stakeholder consultation process. This view was widely supported in the Canadian forest products industry (e.g., Mercier 1996,; Shirley 1997). A fourth coalition group of actors, mainly from the Swedish forest industry such as AssiDomän, favoured a combination of both systems and performance-based approaches to certification (Johansson 1996).

A fifth coalition was not in favour of third-party certification, whether performance or system-based (although it was less opposed to the latter). This view was common in the US forest products industry (e.g., Berg and Olzewski 1995).

Finally, some analysts believed that the importance and impact of certification had been exaggerated and that other measures to promote sustainable forest management should be given higher priority (e.g., Kiekens 1994).

3.6 FACTORS THAT HAVE INFLUENCED THE EVOLUTION OF FOREST CERTIFICATION

The information presented in this chapter allows the identification of a number of factors that have influenced the evolution of forest certification. It was noted in Section 3.2.1 that forest certification was first promoted by international NGOs dissatisfied by intergovernmental initiatives relating to forests, such as TFAP and ITTO.

These NGOs were able to marshal the technical, political and financial resources to support certification in general, and the FSC in particular:

The experience on FSC shows that an international NGO-based initiative can lead to important development work both within and outside the organization, significant to the extent that it had prompted similar initiatives, national and regional, as alternatives to FSC’s. FSC’s concept was designed by NGOs, probably with small market shares targeted initially (Baharuddin and Simula 1997: 14).

This quote suggests that NGOs had both a direct influence in promoting FSC, and then as a result of this a (probably unintended) indirect influence on the development of other certification programmes which arose as a response to FSC. The fact that NGOs, such as WWF, FOE, the Global Forest Policy Project and Greenpeace, had the capacity to support FSC is one of the elements which has contributed to the development of certification. It can be argued that by the early 1990s several international NGOs working on

¹¹ Sabatier’s (1988) definition, which is used in this thesis, states that coalitions are made up of actors in a subsystem who share basic policy beliefs and who collaborate over time.

forest policy found themselves in a position to promote certification for two main reasons.

First, a number of these NGOs had sought to integrate conservation and development perspectives in their policy proposals. One of the first presentations of the concept of “sustainable development” can be found in the *World Conservation Strategy* published by IUCN (then the International Union for the Conservation of Nature), United Nations Environment Programme (UNEP) and WWF in 1980 (IUCN 1980). A number of the ideas from this *Strategy* were taken up in the World Commission on Environment and Development report (WCED 1987: 43). Certification was identified as a tool to achieve the conservation and sustainable development of forests in the second edition of the *World Conservation Strategy*, published before UNCED in 1991. At the same time the *Strategy* questioned the effectiveness of tropical timber boycotts which had been promoted by a number of NGOs in the 1980s.

An important part of the strategy to save tropical forests is to increase the economic benefit for forest nations and communities from using forests rather than converting them to farmland. We therefore need a strong, sustainable tropical timber industry. Economic incentives are needed to build up trade based on sustainable managed forests. A comprehensive package of measures is needed to make trade conditional on sustainability. These would include systems of certification and management with provision for monitoring and financial support for their implementation. Lower-income countries may require assistance to meet criteria. Buying tropical veneers and other valuable tropical hardwood products that have been produced sustainably would encourage maintenance and even improvement of selective wood extraction. Blanket boycotts of tropical timber are likely to favour forest clearance for low-grade shifting cultivation, because they remove economic incentives to keep even modified forests (IUCN 1991: 132-3).¹²

In summary, after the WCED and UNCED sustainable development has been recognised by governments as an objective of the emerging international forest regime. To the extent that forest certification could be presented (as it is in the quote above) as a tool to achieve this objective, it is likely to have had more legitimacy with governments than if it had been presented in isolation. This was important because the main funding source for FSC was governments. It also provided a basis for collaboration with retailers through buyers’ groups. These groups have been seen by some analysts as NGO/business partnerships with the objective of achieving sustainable development (Murphy 1996). Similarly, the sustainable development concept and the recognition of the need for a sustainable timber industry, provided a platform for dialogue and cooperation with forest companies such as AssiDomän in Sweden who have been supportive of certification. Cooperation with these private sector actors certainly increased the influence of NGOs in some countries.

Second, these NGOs had experienced significant increases in their staffing and income in the 1980s, which gave them the technical and financial resources to contribute to the development of forest certification. For example, WWF’s total income world-wide increased from US\$50 million in 1985 to US\$250 million in 1995. During the same period, the staff of WWF International increased from approximately 50 to over 140 (WWF 1996b). Similarly, FOE-UK had an income of £10,000 in 1971, £206,000 in 1981 and £5.3 million in 1995 (Lowe and Goyder 1983; *The Independent* 1996).

A second element, which has contributed to the development of certification programmes, is the set of international processes on criteria and indicators. As discussed in Section 3.2.3, documents from these Criteria and Indicator processes have contributed directly to the development of certification standards in several countries, even though the relationship between Criteria and

¹² Although the *Strategy* referred to tropical forests, the adoption of a global approach to forests at UNCED by governments was followed by NGOs, so these recommendations have come *de facto* to apply to all types of forests.

Indicators and certification has sometimes been the subject of controversy. There may have also been indirect contributions from the numerous discussions and publications on Criteria and Indicators and sustainable forest management.

It is interesting to note that while the C&I and certification processes have influenced each other they have been supported by different actors (mostly NGOs and private sector actors for certification, mostly governments for C&I). In consequence, they have evolved in different ways. The post-UNCED Criteria and Indicators processes had their origin in agreements between governments at UNCED which were expressed in the Forest Principles and Agenda 21. International consensus on the need for C&I led to their development. Certification developed in a converse manner with programmes developing first and international discussions at IPF, and the intersessional meetings to some degree trying to “catch up” with events, as is suggested by the IPF conclusions on certification.

The statements and activities of the BCSD, later renamed the World Business Council for Sustainable Development (WBCSD) show that by 1992 a number of business leaders from large national and international corporations had expressed support for sustainable development.

Business will play a vital role in the future health of this planet. As business leaders, we are committed to sustainable development, to meeting the needs of the present without compromising the welfare of future generations.. New forms of cooperation between government, business, and society are required to achieve this goal (Declaration of the BCSD signed by 48 business leaders cited in Schmidheiny 1992: xi).

The concept of sustainable development has been subject to a variety of interpretations and the BCSD’s interpretation with a focus on economic growth was not the same as that of IUCN, WWF and UNEP in the second edition of the *World Conservation Strategy* (IUCN 1991). However, what should be noted is that a number of influential business leaders had the technical and political

capacity to promote an alternative approach to certification, also within the framework of sustainable development. From an examination of the chronologies of the FSC and ISO processes, it appears that both started at approximately the same time in 1993 and it seems unlikely that one developed in reaction to the other. They can be viewed as parallel processes promoted by different actors. On the other hand, the creation of the forestry working group in 1996 in ISO/TC207 clearly had part of its origins as a response to FSC.

Other elements that have influenced the development of certification are the evolution of ecolabelling and the increased use of economic instruments for environmental protection as mentioned in Section 3.3. It is not possible to establish any causal links between these developments from the international overview presented in this chapter, but it is likely that these trends provided a favourable environment for the development of certification programmes.

Two other significant influences on the emerging international forest regime which have affected the development of certification schemes and will probably continue to do so in future, are the conclusion of the Uruguay Round of the GATT (and the signature of the Technical Barriers to Trade agreement) and the adoption of ISO 14001 and ISO 14020 (and the creation of the ISO forestry working group). The TBT agreement is likely to influence all ecolabelling programmes. As mentioned above, ISO has provided a forum and mechanism for the development of system-based certification.

3.7 SOME OUTSTANDING POLICY ISSUES

The international policy dialogue on forest certification over the period 1990 to 1997 raises two key policy issues.

The first is harmonisation between the different existing and emerging certification schemes.¹³ Without harmonisation, the

¹³ Harmonisation is defined here as making different forest certification systems and (or elements of these systems) compatible and comparable.

proliferation of different certificates and labels, each with their proponents and critics, may lead to consumer confusion. The result might be that third-party certification becomes discredited in the same way as first-party environmental claims and labels were in the US (EPA 1993).

Harmonisation could be achieved by competition, on the assumption that the market will allow the “best” schemes to dominate. However, as mentioned above, competition may also lead to confusion. In addition, the schemes that come to dominate eventually may be characterised more by their powerful supporters rather than superior attributes. Harmonisation could also be achieved through mutual recognition, in which the supporters of different schemes recognise the equivalence of other schemes. Mutual recognition will require a clarification of several issues: the relationship between performance and systems-based approaches to certification; the links between certification standards and Criteria and Indicators for sustainable forest management; and the identification of mechanisms to ensure independence in the case of government-administered certification schemes. Progress on the first two issues may be facilitated by the CIFOR project which is comparing different forest management unit-level Criteria and Indicators and certification standards and developing a “tool box” to assist in their further development (Prabhu *et al.* 1997).

In September 1997, the Directorate General for Development of the European Commission published an independent report which it had

commissioned on options for international institutional arrangements for forest certification and implications for ACP (African, Caribbean and Pacific) countries (Indufor Oy 1997). The report noted the need for harmonisation of certification schemes although it noted that it was probably premature for this to occur at present before more experience is accumulated through practical application in both forest organisations and the market place, which is likely to take several years.

The second issue is credibility. The FSC has been criticised for several certifications made on the basis of the Principles and Criteria and its credibility has also been challenged on other issues such as the representativeness of its membership. Similarly, ISO and the 14001 standard have been criticised on various counts. If certification is not widely seen as being credible it is unlikely to be able to achieve its objectives. A number of suggestions have been made to increase the credibility of certification. Having forest assessments and the issuance of certificates done by separate organisations would reduce potential conflicts of interest. Increasing the number of assessors and certification bodies from developing countries would diminish the concern that certification is the preserve of consultants from developed countries. Also, mechanisms to ensure increased stakeholder participation in standards development, and equitable provisions for making progress in the absence of consensus from important actors, would increase the credibility of certification.

Chapter 4

Forest Certification in Indonesia

Data collection for this case study was carried out during two trips to Indonesia. In 1996, a five-week visit was made in July and August. Most of the time was spent as a visiting fellow at the Center for International Forestry Research (CIFOR) in Bogor, with trips to Jakarta to meet government officials, NGOs, academics and representatives of the private sector. A short visit was made to a forest concession and a research site in Kalimantan. In 1997, a one-week visit was made to Jakarta and Bogor in July to collect information on developments in the previous 12 months. An Indonesian forestry student Mr Yudi Iskandar was retained as a research assistant for the duration of the case study, and he continued to track developments on certification between the two visits, and until June 1998.

Key informants were identified by a combination of reputational and positional approaches (Laumann and Knocke 1987: 95-100). The positional approach was used first, and suggested the need to interview senior figures in private sector forestry associations, the Ministry of Forestry, universities and NGOs. Actual interviewees were then identified in a reputational manner from the literature review, from previous contacts in Indonesia and on the basis of recommendations from researchers at CIFOR.

4.1 FOREST CERTIFICATION IN INDONESIA: HISTORICAL BACKGROUND

The Advocacy Coalition Framework is based on the premises that understanding policy change requires a perspective over a decade or more,

and that the most useful way to think of change over such a period is to concentrate on “policy subsystems”, or domains. Accordingly, the focus of this chapter is on the Indonesian forest policy domain, and the development of a forest certification programme over the period 1990-1997 is presented in the context of changes in the domain since the early 1980s. This section provides a brief historical overview of the evolution of forestry in Indonesia, as background to the rest of the chapter.

Forestry in Indonesia has changed rapidly over the last 30 years. Until the late 1960s, commercial timber production was mostly limited to teak plantations in Java, which have a long history dating back before Dutch colonisation (Durand 1993a). Starting in the early 1970s, large areas of forests in the “outer islands” (especially Kalimantan and Sumatra) were allocated by the government to the private sector in the form of 20-year timber concessions.

Annual log production increased from 1.4 million cubic metres in 1960 (MOF 1995: 4) to 33 million in 1996 (ITTO 1996: 60). Indonesia phased out log exports from 1991 to 1996 (Manurung and Buongiorno 1997), and placed heavy export taxes on sawnwood exports in 1989, to promote domestic processing. It is now the world’s largest tropical plywood exporter, selling 8 million cubic metres in 1996 (ITTO 1996: 62). The forest sector contributes approximately US\$9 billion per annum to the economy (World Bank 1995: i). At least 12 million people in rural areas depend, at least in part, on forests for their livelihood (MOF 1995a: 1). It is estimated that 2.5 million people are directly employed in logging

and timber processing and another 2 million are indirectly employed by the industry (MOF 1996).

Concerns began to be raised about deforestation and forest degradation in Indonesia by Indonesian NGOs and foreign scientists and observers in the mid-1980s, at a time when international concerns about loss of tropical forests, and the role of the international timber trade in this, were increasing. One of the catalytic events was the large forest fires in Kalimantan in 1982 and 1983.¹⁴ One influential book published at the time by Dr Norman Myers (1994: 91-3) made the link between international consumption of tropical timber and deforestation in Indonesia:

I remember seeing a tree being felled by a logger in a forest in Borneo...each day thousands of such trees are cut in Borneo. Logging of any sort contributes to a pattern of depletion that may leave little forest of any sort, except degraded fragments, in Southeast Asia by the start of the next century...The consumerist demand by affluent people many thousands of kilometres away from Borneo or Amazonia is a prime impulse behind the headlong rush of many nations that have tropical hardwoods to harvest their hardwood timber at rates beyond which the forest can renew it.

Responding to this, international environmental NGOs began making calls for boycotts of tropical timber, starting with Friends of the Earth in the UK in 1984 (Dudley *et al.* 1995: 109). Initially this led to bans on the use of tropical timber in public constructions in various municipalities in Germany, Holland, the UK and the USA (ITTO 1992: 17).

In the late 1980s and early 1990s, the Indonesian Ministry of Forestry embarked on a comprehensive review of policies in the forest sector with the assistance of FAO as part of a Tropical Forestry Action Plan exercise. By the early 1990s, Indonesian policies in the following areas were the focus of discussions in the academic literature and in government publications: land classification, forest tenure, the

forest revenue system, forest industry, forest management, forest plantations and protected areas (e.g., MOF 1995a; Soemitro 1995). It is in a policy context dominated by these issues that the first steps were taken to develop a forest certification programme in 1992. Already in 1990, the teak forests in Java, which are managed by the State Forestry Corporation Perum Perhutani, had been certified by SmartWood. In 1992, the Indonesian Forestry Community (MPI), an influential umbrella organisation of private sector associations, created a working group to develop criteria and indicators for sustainable forest management. In 1993 the Minister of Forestry asked Dr Emil Salim, a former Minister of the Environment, to create a working group on certification with NGO input. By the end of 1997, agreement had been reached between this working group, the Ministry of Forestry, the association of forest concession holders (APHI, a member of MPI), and the Indonesian national standards body on the criteria and indicators for assessing sustainable forest management and the other components of the Indonesian certification programme. Finally in February 1998, LEI was formally established as a foundation to administer the forest certification programme.

Before discussing these events in more detail, it is necessary to review the Relatively Stable Parameters, the External System Events and the policy domain actors and structure, following the Advocacy Coalition Framework (ACF) approach. One of the challenges in applying the ACF to the Indonesian forest policy domain, is that so much has changed since the 1960s that few parameters appear to be stable. However there is more stability than may appear at first sight. The legal framework is provided by a forest law that has not changed since 1967. The Golkar political formation has been in power since 1965, even

¹⁴ Forest fires broke out again in Borneo and Sumatra in 1997 causing air pollution in large parts of Southeast Asia. A number of factors were involved including clearance of forests to establish plantations, and the Indonesian government and timber industry were heavily criticised in the international press for what one editorialist described as "wanton destruction of natural resources" (IHT 1997a).

after the resignation of President Suharto in May 1998. The domination of the forest policy domain by the Ministry of Forestry and the forest industry has been in place for over two decades. For the purposes of testing the ACF, the period of growth from the late 1960s to the mid 1980s is viewed as the “baseline” and classified as “stable”. Policy change is linked to external system events such as changes in international public opinion and policy impacts from other systems, which began in the early 1980s¹⁵.

4.2 RELATIVELY STABLE PARAMETERS

Relatively Stable Parameters are divided into several categories: basic distribution of natural resources; basic attributes of the problem area; fundamental cultural values and social structure; and basic legal structure.

4.2.1 Basic Distribution of Natural Resources

The Republic of Indonesia is an archipelago of over 13 000 islands, lying on the equator between mainland Asia and Australia. The population, which reached 200 million in 1997 (McLeod 1997), is unevenly distributed. For example, 60% is concentrated on the island of Java, which has a population density of 846 persons per km². Irian Jaya, in comparison, has only 4.3 people per km².

Botanically, Indonesia is part of the Malesian region, which has a rich flora containing at least 10% of the world’s total of flowering plants (Whitmore 1985: 5). The fauna includes species of both oriental and Australian origin, separated by the Wallace Line (Wallace 1860). Sixteen per cent of the world’s bird species and 12% of mammals can be found in the archipelago (Durand 1994: 188).

Indonesia ranks third in the world after Brazil and Zaire in its endowment of natural tropical forests: 109.8 million ha (FAO 1997: 187). However, the area of forests in Indonesia has been subject to divergent estimates. The June 1996 Government of Indonesia/FAO Forest Resource Assessment Report puts the total forest area at

120.6 million ha, most of which is lowland tropical rainforest (GOI/FAO 1996: 31). This amounts to 69% of the country’s land area, excluding Java. On the other hand, the Sixth Five-Year Development Plan (REPELITA VI 1994/95-1998/99) refers to an area of 92.4 million ha in 1993 which amounts to 48% of the total land area (cited in Sunderlin and Resosudarmo 1996: 1). Part of the difference can be attributed to varying definitions of “forest land”. If one refers to the category of the designated permanent forest estate which is actually “forest covered”, the GOI/FAO Forest Resource Assessment Report gives the figure of 90.1 million ha, which is closer to the REPELITA VI figure.

A similar situation holds for data on deforestation rates. Estimates of the annual deforestation rate diverge widely – partly because of the use of different definitions and partly because of weak data – ranging from 263 000 ha (TAG 1991) to 2.4 million ha per year (Hasanuddin 1996). FAO estimates the annual rate to be 1.1 million ha (FAO 1997: 187). There has been considerable controversy concerning the causes of deforestation, with analysts divided over the direct and indirect responsibilities of shifting cultivation, transmigration and logging. In a recent review of the literature on this subject, Sunderlin and Resosudarmo (1996) note that since 1994 researchers have tended to give more emphasis to the indirect role of logging and less to shifting cultivation.

There are also differences in figures on forest classification. The permanent forest estate has been divided by the Ministry of Forestry into four categories (Table 4.1).

Forest concessions in production forests and limited production forests are allocated by the

¹⁵ Following President Suharto’s resignation in May 1998 a number of significant political and economic changes have occurred. In 1999 a general election was held and Abdurrahman Wahid became Indonesia’s first democratically elected President. East Timor, formerly considered an Indonesian province, was granted independence after a local referendum and considerable violence. As this thesis is going to press in late 2000 Indonesia still faces an economic crisis and President Wahid’s grip on power seems uncertain

Table 4.1 Permanent Forest Estate in Indonesia, Classified by Designated Land Function

Function	Forest-covered area (million ha)	Non forest-covered area (million ha)	Percentage of total forest- covered area in Permanent Forest Estate
Protection forest	24.9	5.3	27.6
Nature conservation and recreation forest	15.0	2.4	16.7
Production forest	24.8	6.0	27.5
Limited production forest	25.4	5.7	28.2
TOTAL	90.1	19.4	100.0

Note: Land functions are designated by the Ministry of Forestry. The Permanent Forest Estate is the area of forest land that is supposed to remain permanently under forest cover, or to be reforested. No exploitation is permitted in protection or conservation forest, selective felling is.

Source: derived from GOI/FAO (1996: 31)

Ministry of Forestry to Indonesian corporations or individuals. By 1996, 445 concessions had been allocated covering 54.1 million ha (MOF cited in Sunderlin and Resosudarmo 1996). This is more than the total area of forested lands in production and limited production forest areas according to Table 4.1, which suggests either an anomaly in the figures or that part of the area in concessions is not forested.

4.2.2 Basic Attributes of the Problem Area

In the ACF, a number of attributes of the issue or problem area in question are considered to affect the range of policy options available. “Excludability” and a good’s susceptibility to quantitative measurement are two basic stable attributes mentioned by Sabatier (1993: 20) as affecting the range of feasible policy alternatives. Both are relevant in the Indonesian case.

Although most of Indonesia’s forests are owned by the State and placed under the authority of the Ministry of Forestry, foreign observers have questioned the Ministry’s capacity for adequate control over activities in the forests because of limited staff resources, the geography of the country and the influence of the timber industry. One report actually refers to the forests of Indonesia as an “immense commons” (Barber *et al.* 1994: 13). The Ministry of Forestry has recently begun to recognise this problem to a limited degree, and has noted in the Indonesia

Forestry Action Programme that it has not been possible for it to oversee the activities of concessionaires in an effective manner (MOF 1995a: 14).

Quantitative data on Indonesian forests is often conflicting. Contradictory information on forest area, deforestation rates and forest classification has been mentioned in the Section 4.2.1. These are not simply technical problems. There are fundamental policy implications associated with any figures, and it has been argued (Ascher 1993) that the Ministry of Forestry is reticent about collecting and publishing data for this reason.

4.2.3 Fundamental Cultural Values and Social Structure

The ACF assumes that basic cultural values and social structure are stable and change occurs over decades rather than years. Indonesia is culturally and socially diverse with approximately 250 languages spoken in the archipelago. Ethnically the country is more homogenous, with 96% of the population of Malay origin. The official language is Bahasa Indonesia. Islam was introduced by traders in the 13th century and is the dominant religion. There are substantial regional disparities of population density and wealth with the islands of Java and Bali, which only cover 7% of the total land area, containing over 60% of the population. There are 27 provinces but economic and political activities are

centralised in West Java. Regional disparities have led to political tensions that have sometimes been exacerbated by the effects of the “Transmigration” programme designed to resettle poor farmers from Java to the “outer islands” (EIU 1997a: 22-24).

Indonesia’s territory today is defined by the boundaries of the former Dutch East Indies, as the country was not a single political entity before Dutch colonisation that began in 1602. In 1942 the Japanese conquered the Dutch East Indies and, after Japan’s defeat, Indonesian nationalists under the leadership of Sukarno declared independence. Sukarno became President and a 15-year period of political instability and economic decline followed, during which there were numerous verbal conflicts with the Netherlands and even a military conflict with Malaysia. In 1965 there was an attempted *coup d’état*, led by a group of military officers with the alleged support of the Indonesian Communist Party and China. The coup was crushed amid bloodshed and as many as 750,000 alleged supporters of the Communist Party were killed. The coup marked the end of Sukarno’s presidency and in March 1966 a “New Order” was established (EIU 1997a: 3-5).

At the start of the New Order period, the economic situation was very difficult with production and investment falling, GDP per capita at US\$80, and large public deficits. The new government established three economic objectives: stability, growth and equity, to be achieved through a series of five-year development plans (REPELITA), applicable to both the public and private sectors (EIU 1997a: 10-15). The first REPELITA (1969-1974) focussed on agriculture. Subsequent REPELITAs have concentrated on manufacturing and industry. REPELITA VI (1994-1999) was intended to set the stage for Indonesia to become a modern industrial economy by 2020. The focus was on increasing the share of manufacturing industry in GDP from 24% to 33% (MOF 1995a: 5-6).

The economic objectives were achieved in several dimensions: GDP per capita reached US\$1118 in early 1997 (EIU 1997b), and the economy grew at an average rate of 6.8% from 1965 to 1995 and became increasingly export-

oriented (MOF 1995a: 2). Traditionally Indonesia has relied more on exports of natural resources than its neighbours, but the government successfully sought to diversify into manufactured products such as textiles and garments (King 1996). In 1995, oil and gas accounted for 23% of exports by value, followed by timber products (10%) and textiles (6%) (EIU 1997b: 36). Poverty declined from the 1960s but substantial inequalities of income remain, as well as widespread corruption (*Jakarta Post* 1997a).

A regional economic crisis in Southeast Asia, which began in 1997 as the Indonesian forest certification programme was being finalised, had major political and economic impacts on the country. The Indonesian rupiah fell from a July 1997 exchange rate of 2450 per US dollar to over 10 000 in January 1998 (CIFOR 1998) and continued to decline through June 1998 when research for this thesis was being completed. In May 1998, President Suharto resigned and was replaced by his Vice President Mr Habibie. In mid-1998, the International Monetary Fund (IMF) reported that 50 million Indonesians were living in poverty, largely due to price increases of imported basic staples associated with the decline in the value of the rupiah (IHT 1998). This represented an increase of approximately 20 million people living under the poverty line since 1991 (UNDP 1993). As part of a US\$40 billion package to provide assistance to the Indonesian economy, the IMF insisted on a number of measures to reform and liberalise the Indonesian forest sector. These are discussed in Section 4.3. While the economic and political changes in 1997 and 1998 do not appear to have affected the finalisation of the forest certification programme, they will certainly have impacts on programme implementation and these are discussed in Section 4.6.

4.2.4 Basic Legal Structure

4.2.4.1 National Structure

The Republic of Indonesia is formally a constitutional democracy with a strong executive president. The Presidency was occupied from 1965 to 1998 by Mr Suharto, a former army general. In May 1998, after political and economic

turmoil in the country and throughout Southeast Asia, Mr Suharto resigned and was replaced by his Vice President Mr Habibie. The political structure is still dominated by a government-supported party organisation called “Golkar”, which is intended to represent a broad range of social and professional interests, although by July 1988 Golkar’s future seemed uncertain (IHT 1998). If Golkar were to undergo fundamental reform, the structures described below would probably also be modified¹⁶. There are two smaller approved parties, the United Development Party and The Indonesian Democratic Party in addition to Golkar. The military has a “dual function” in Indonesian society: protecting the country from external aggression and from internal subversion. The armed forces are guaranteed representation in parliament and officers often occupy important political and administrative posts.

The legal structure in Indonesia is defined by the 1945 Constitution: *Undang-Undang Dasar 1945*, which is based on the five principles of Pancasila.¹⁷ The constitution provides for seven principal organs of state (see Figure 4.1). The House of People’s Representatives has 500 members; 400 of these are elected every five years under a system of proportional representation and the remainder are appointed by the President from the armed forces. The People’s Consultative Assembly is the highest authority of State and consists of the 500 members of the House of People’s Representatives and an additional 500 members appointed by the government. The Assembly meets in ordinary session only every five years and its main functions are to elect the President and Vice President, and to approve the basic elements of the five-year development plans (REPELITA). The President is the highest executive officer. He selects a Cabinet of Ministers (who are not members of the House of People’s Representatives), who report to him through the Secretary of State.

The constitution, the fundamental goals of national development and the REPELITAs (five-year development plans) provide a basic framework for the development of legislation, which may be prepared in three ways (GOI/IIED 1985: 9-15):

- 1) draft legislation prepared by Ministers and submitted to the House for approval via the office of the secretary of state;
- 2) Presidential Decrees; and
- 3) in theory, legislation could be initiated by the House of People’s Representatives, although this has apparently never happened (EIU 1997a: 5).

4.2.4.2 Structure of the Forest Sector

The basis for State control over forest lands is provided by Article 33 of the constitution, which reads:

Land and water and the natural resources therein shall be controlled by the State and be made use of for the greatest welfare of the people (cited in Zerner 1990: 15).

From independence until the early 1960s, forest management was mostly small scale. With the subsequent expansion of commercial exploitation, the need for a specific legislative framework for forestry activities was identified. In 1967, the Basic Forestry Law was passed. It constitutes the most comprehensive statement of government forest policy (GOI/IIED 1985: 16). The State is given the following tasks:

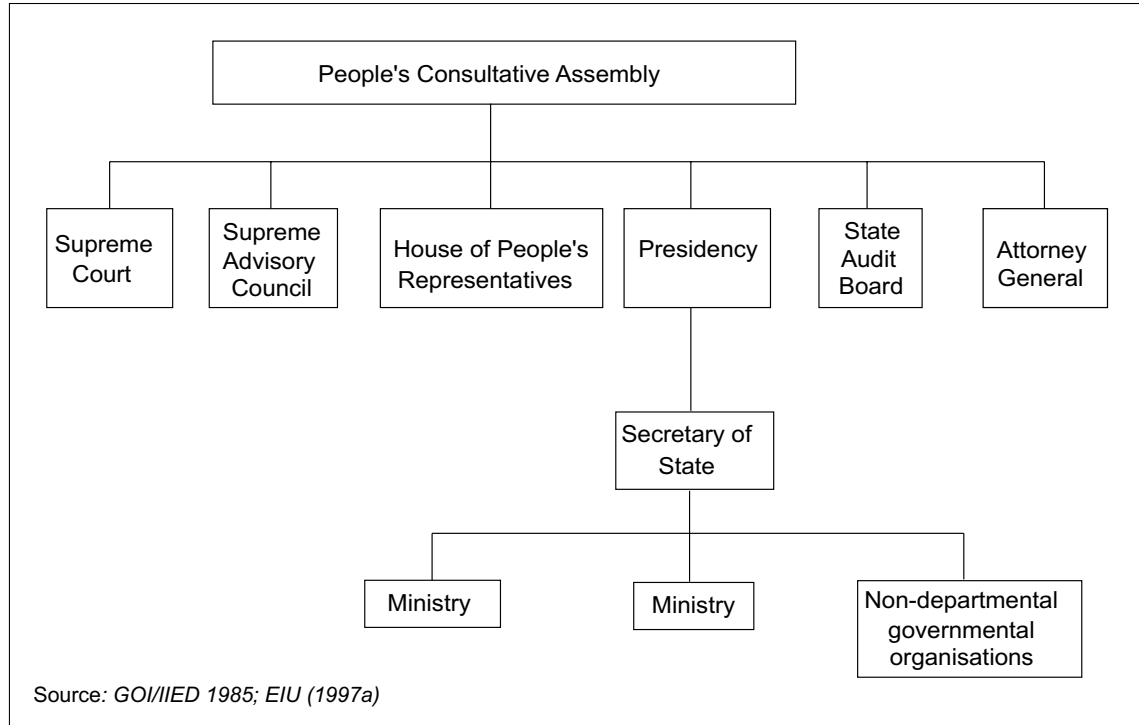
Determining, organizing and planning the purpose, supply and use of forests according to the interest and benefit for the State and population;

Management of forests in a broad meaning;

Determining and arranging legal relations between people or legal institutions with forests and managing legal activities on forests (Article 5 of the Basic Forestry law, quoted in GOI/IIED 1985: 17).

¹⁶ After the general elections in 1999, Golkar lost power and Abdurrahman Wahid became President leading a coalition government. This led to a number of changes including a weakening of the power of central government compared to provincial authorities.

¹⁷ Pancasila (meaning “five principles”) is the official state ideology. The principles are: belief in God, a just and civilised humanity, the unity of Indonesia, democracy and social justice.

Figure 4.1 Organisational Chart of the Government of Indonesia

The law identifies a number of forest functions including: water regulation, production of forest products, community livelihood, protection of flora and fauna, transmigration and agriculture. The State is required to maintain these. The purpose of management is:

...not only meant for the protection and development of forests, but also and mainly to take benefit from the advantage of our forests in the interest of the community... (Explanation of the Basic Forestry Act cited in GOI/IIED 1985: Annex A).

Although the law uses the term “community” repeatedly, it appears that this refers to Indonesian society as a whole rather than local communities. In fact, the Law makes it clear that State control extends to include forest previously owned by local communities under traditional land rights (*adat*). This has been described as a *de facto* nationalisation of forests (GOI/FAO 1990: 144):

Implementation of social rights, traditional rights as well as individual rights to obtain advantage from forests must not interfere with the goals stated in this Law (Article 17 of the Basic Forestry law, cited in GOI/IIED 1985: 18)

Although the Law adopts a balanced approach to the different forest functions, timber production has been given the highest priority in the three decades since 1967. In a 1990 publication, the Ministry of Forestry recognised this, referring to timber production as “...arguably still the most important forestry activity in the country” (GOI/FAO 1990: 143).

After 1967, implementation of the Law was the responsibility of a Directorate-General of Forestry within the Ministry of Agriculture, but in 1983 a separate Ministry of Forestry was created (see Figure 4.2). It should be noted that administration, planning and monitoring are highly centralised, particularly when it comes to production forestry (GOI/FAO 1990: 100).

There are also four State-owned forestry enterprises: Perum Perhutani, and PT Inhutani I, II and III. Perum Perhutani manages 1.9 million ha of forest plantations in Java, which were originally certified by the Rainforest Alliance in 1990. The Inhutanis manage concessions on a commercial basis. One of the conditions attached to the financial rescue package from the IMF and the World Bank in 1998 was that the control of these enterprises should be transferred from the Ministry of Forestry to the Ministry of Finance.

Policy guidance for the Ministry of Forestry is given by the Basic Forestry Law and REPELITAS. However these provide only a general framework. Since 1967, the Basic Forestry Law has been complemented by the following legislation adopted by the House of People's Representatives (GOI 1995: vii-viii).

- Forest Planning Law of 1970, which addressed the establishment of a permanent forest estate for sustainable timber production.
- Environmental Law of 1982, establishing national policy objectives of harmonious relationships between man and the environment, rational use of natural resources and providing for environmental impact assessments.
- Forest Protection Law of 1985, aimed at protecting forests and their multiple functions and minimising forest degradation.
- Industrial Timber Plantations Law of 1990, promoting timber plantations to rehabilitate degraded lands.
- Law on the Conservation of Nature and Living Resources of 1990 on biodiversity conservation.
- Law of 1992 on Population, Development and Family Welfare.

These laws are implemented through several kinds of regulations. At the highest level are Government Regulations. They are prepared by the Ministry and submitted to the presidency for approval via the State Secretariat. Below Government Regulations, there are Ministerial Decisions and below these are Directors' General Decisions. In addition, the President occasionally issues detailed presidential decrees on forestry matters.

These laws and regulations provide the government with a variety of policy tools ranging from subsidies, education and communication programmes to "command and control" regulations in order to pursue its objectives. The use of policy tools varies depending on the issue. For example, the Directorate-General for Forest Protection and Nature Conservation has a public education programme on nature conservation. In the area of forest management, there is a clear preference for "command and control" regulatory approaches, implemented in a centralised manner. In 1989 there were 18 Ministerial Regulations governing concessions. By 1995 this number had increased to 85, to which should be added 8 new Presidential Decrees and 38 Directors' General Decisions (Hariadi, personal communication, March 1997). By 1995, one concessionaire cited by Bennett *et al.* (1997: 68) claimed that to comply with these regulations he had to file 14 monthly reports and four annual reports to the Ministry of Forestry.

Forest concessions are granted to State corporations and private Indonesian corporations for up to 20 years in production forest areas (see Table 1, Section 4.2.1). The concessions may be renewed if the performance of the concessionaire is satisfactory. Concessionaires are required to pay a variety of fees, taxes and royalties. There were 575 concessions covering 61.2 million ha in 1994 (MOF 1995b). In 1996, the Ministry of Forestry reported that 445 concessions were operating on 54.1 million ha. (Sunderlin and Resosudarmo 1996: 1). The difference between the two figures is reportedly due to the cancellation of concessions by the Ministry of Forestry because of violations of logging regulations by concessionaires.

Forest management is based on the Indonesian Selective Cutting and Planting Silvicultural System, designed to produce a sustainable supply of timber on a growing cycle of 70 years with a harvest every 35 years. Only trees over 50 cm diameter may be harvested. Logging is done in blocks, with each concession being divided into 35 annual blocks. The Annual Allowable Cut for each block is set by the Ministry of Forestry. At least 25 commercially valuable

trees with diameters between 25 cm and 50 cm must remain after logging, and post-logging enrichment planting is required. In principle, their requirements imply that approximately one cubic metre of timber would be harvested per hectare annually. Planning requirements are stringent and complex, with concessionaires being required to submit annual management plans, various work plans, environmental impact assessments and community development plans (GOI 1995: 15-16).

A volume-based reforestation fee levied on concessionaires goes into a reforestation fund managed by the Ministry of Forestry. This fund is meant to be used to fund reforestation activities (GOI 1995), but there have been a number of alleged cases of Presidential misuse as discussed in the following section. In consequence, the World Bank and the IMF have required that the reforestation fund be incorporated into the national budget and used only for reforestation purposes, as a condition attached to the economic rescue package of 1998.

4.2.4.3 The Private Sector

This overview of the structure of the forest sector would be incomplete without a discussion of the private sector. The sector is highly organised and has significant economic and political influence (GOI/FAO 1990: 141). Individual actors in the sector are typically industrial groups with interests in a variety of sectors. Traditionally they have been owned by “timber tycoons”, such as “Bob” Hasan, president of the Indonesian Forestry Community (MPI). Until the 1997 economic crisis, increasing numbers were seeking to sell shares and be listed on the stock exchange, following the example of Barito Pacific, Indonesia’s largest plywood manufacturer. Forestry activities in these industrial groups are vertically integrated, and include one or more concessions and plywood mills. In the 1980s, the private sector organised into several industry associations, the most important of which are the Indonesian Wood Panel Association (APKINDO), the Indonesian Sawmillers Association (ISA), the Indonesian Furniture and Handicrafts Producers Association (ASMINDO) and the Indonesian Concession Holders Association (APHI). These associations are grouped under an umbrella

federation, the Indonesian Forestry Community (MPI). Richardson (1990: 90) noted that “The Forest Industry Associations are a major force in determining forest policy and in its implementation: they may, indeed, be the driving force”.

Both individual companies in the private sector and the industry associations operate in a centralised manner (like the Ministry of Forestry) with important decisions being made in Jakarta. A recent, controversial example of the influence of the private sector was a Presidential Decree in 1996 granting US\$100 million from the reforestation fund to PT Kiani Kertas to finance a US\$1 billion pulp and paper mill in East Kalimantan. PT Kiani Kertas is a subsidiary of the Kalimanis Group owned by Mr “Bob” Hasan, the president of MPI. In July 1996 five NGOs, including the Indonesian Forum for the Environment (WALHI), filed a suit in the Jakarta state administrative court calling for the annulment of the Presidential Decree on the basis that this was an improper use of monies from the reforestation fund, because they are only supposed to be used for reforestation (*Jakarta Post* 1997b).

The links of the associations to the Ministry of Forestry are symbolised by the fact that they have their offices in the same complex as the Ministry in central Jakarta. The associations function as marketing boards and members are required to channel their exports through them (World Bank 1995: iii). The economic and environmental impacts of APKINDO have been criticised by foreign observers who have argued that it seeks to promote its own interests by maximising plywood export volumes, rather than focussing on quality and efficiency (NRMP 1995: 57). As part of the financial rescue package provided by the World Bank and the IMF in 1998, APKINDO’s monopoly on plywood exports was to be abolished, fees charged to forest concessions were to be increased and concessions were to be allocated under an auction system in the future (CIFOR 1998).

The structure of one private sector actor can be briefly presented as an illustration. The Dwima group is a large industrial conglomerate with interests in forestry, shipping and agriculture and employing over 4000 staff (Dwima 1992). The group operates four forest concessions covering 400 000 ha in Central Kalimantan through four

affiliated companies PT Dwima Utama, PT Carus Indonesia, PT Kayu Waja and PT Hutan Mulia, all of which are members of APhi. Top-grade plywood for export markets is made by the affiliated company PT Dwima Manunggal Raksa (a member of APKINDO) and furniture is made by PT Panca Prasetya Agung and PT Dwima Prasetya Tama, which are members of ASMINDO.

4.3 EXTERNAL SYSTEM EVENTS

Starting in the mid-1980s a number of events occurred which influenced the context surrounding the forest policy domain. Socioeconomic conditions deteriorated with depressed oil prices, local and international concerns grew about deforestation and forest degradation, governing coalitions changes and policy decision in other sectors affected forestry.

4.3.1 Changes in Socioeconomic Conditions

Both the macroeconomic conditions facing the Indonesian economy as a whole and the technology used in the forest sector changed significantly in the 1980s. Due to the decline of oil prices, economic growth rates fell from the high levels experienced in the 1970s. The annual GDP growth rates averaged 3.4 % from 1980 to 1986, which was considerably lower than the overall average of 6.8% over the period 1965-1995. GDP actually declined by 2.2% in 1982 (MOFa 1995: 3). The government responded to this situation with a structural adjustment programme in 1983. The programme aimed to improve economic efficiency and reduce Indonesia's dependence on oil exports. It involved currency devaluations, cutbacks in government spending, incentives for foreign investments and deregulation measures (MOFa 1995: 3-4).

To date there has been little evidence of deregulation or disinvestment of State assets in the forest sector, and the Ministry of Forestry has taken the position that a legal and operational framework for deregulation should be defined at the national level before sectoral approaches can be implemented (MOF 1995a: 18). Indeed, two of the major forest policy initiatives taken in the

1980s (the log export ban and sawnwood export taxes) involve **increased** government regulation of the sector. On the other hand, these initiatives did lead to the development of a value-added export industry, which contributed to reducing Indonesia's reliance on oil and gas exports.

In conclusion, it can be seen that Indonesia started the 1980s as a log exporter and ended the decade as a major plywood exporter, largely in response to a changing economic climate. With the growth of the plywood industry, the political and economic influence of the private sector increased as mentioned in Section 4.1.

The development of the pulp and paper industry is a current priority¹⁸ with substantial investments being made in plantations and pulp and paper mills, partly encouraged by tax write-offs (Widinugraheni 1996).

The economic and political crisis of 1997/98 brought the Indonesian economy to the brink of collapse in January 1998. The government had no choice but to accept a package of policy reforms as conditions associated with the World Bank/IMF rescue package. Measures directly relevant for the forest policy domain were:

- Reduction of export taxes on logs to a maximum of 10% of export value;
- Elimination of APKINDO's monopoly on plywood exports;
- Reduction of forest conversion targets and implementation of a system of performance bonds for forest concessions;
- Increase in taxes and royalties charged to concessions and allocate concessions by auction;
- Transfer of control of government-owned forestry companies from the Ministry of Forestry to the Ministry of Finance; and
- Incorporation of the reforestation fund into the national budget and place it under the control of the Ministry of Finance (CIFOR 1998).

¹⁸ At the end of 2000 the development of the pulp and paper industry was still a priority for the forest sector, although access to capital for investment was a serious problem because of the ongoing financial crisis.

The last two measures will strengthen the influence of the Ministry of Finance in the forest policy domain if they are fully implemented. In addition, it should be noted that the Asian economic crisis also affected Indonesia's plywood exports to key markets such as South Korea and Japan. The Ministry of Forestry estimated that plywood export revenues in 1997 were 25% lower than in 1996 (CIFOR 1998). When this thesis was being finalised in mid-1998, it was still too early to assess the overall impact of these policy changes and export reductions.

4.3.2 Changes in Public Opinion

As noted in Section 4.1, concerns began to be raised about deforestation and forest degradation in Indonesia by Indonesian NGOs and foreign scientists and observers in the mid-1980s. This was at a time when international concerns about loss of tropical forests, and the role of the international timber trade in this, was increasing. One of the catalytic events was the large forest fires in Kalimantan in 1982 and 1983.

In response to this situation international environmental NGOs began making calls for boycotts of tropical timber, starting with Friends of the Earth in the UK in 1984 (Dudley *et al.* 1995: 109). Initially this led to bans on the use of tropical timber in public constructions in various municipalities in Germany, Holland, the UK and the USA (ITTO 1992: 17).

Tropical timber boycotts could have had a significant impact on Indonesia because the country had been expanding timber exports to reduce its reliance on oil and gas exports. In 1988, the total value of wood exports stood at US\$45 billion per annum (GOI/FAO 1990: 133). Japan, Taiwan and South Korea import 60% of Indonesia's exports of wood and wood products, by value (MOF 1996). Exports to these countries have continued to grow since the 1980s. Europe and the USA have accounted for a steady share of 20%-25% of Indonesia's wood export revenues since 1988. Within Europe the key markets are Germany, the Netherlands and the UK. These are "ecosensitive" markets, where awareness of tropical forest conservation issues is relatively high (Wadsworth and Boateng 1996; Bennett *et al.* 1997).

A further development since the late 1980s has been the proliferation of ecolabelling programmes affecting products ranging from detergents to computers (EPA 1993). Overall the main destinations of Indonesia's exports are OECD countries, led by Japan and the USA and, in addition to timber, a significant percentage of other Indonesian exports are in product categories likely to be affected by ecolabelling schemes in OECD countries in the future (UNCTAD 1995) (Table 4.2).

Table 4.2 Value of Indonesian Exports in Product Categories Likely to Be affected by OECD Countries' Ecolabels

Product category	1995 export values in US\$ million
Wood products	5 026
Pulp and paper	931
Textiles	2 713
Clothing	3 376
TOTAL	12 046
Percentage of Total Exports	26.5%

Source: EIU 1997b

In addition, the role of domestic NGOs working on social and environmental issues has strengthened over the last decade. These NGOs have called for more participation and transparency in the public sector, including the Ministry of Forestry.

4.3.3 Changes in Systemic Governing Coalitions

The political structure was very stable in Indonesia from 1965 until 1998, but there was considerable uncertainty after President Suharto's resignation in May 1998.¹⁹ Economic policy was also been stable although foreign analysts (e.g., Schwartz 1994) have suggested that, within the political and economic framework based on Pancasila and the three economic objectives of stability, growth and equity, there are two schools of thought on

¹⁹ As noted above in previous footnotes, this uncertainty still reigned in late 2000 when this thesis was going to press.

economic policy. The first called “technocrats” gives priority to economic development through the efficient allocation of resources and maintenance of Indonesia’s international competitiveness. The technocrats dominated policy-making from the mid-1960s until the 1970s and again from the early 1980s until recently. The second school is referred to as “technologists” and are more influenced by economic nationalism and the desire to promote Indonesia’s development as an industrial economy with less attention to the financial costs involved. The technologists enjoyed influence after the oil price increases of the mid-1970s until their decline in 1983, and are alleged to have made a resurgence after President Suharto’s re-election in 1993 (EIU 1997a: 13). They gained support when Vice President Habibie (a leading technologist) became President in 1998.

4.3.4 Policy Decisions and Impacts from other Subsystems

In the ACF model, the decisions and impacts from other subsystems are seen as potentially among the most important dynamic events affecting policy change in a domain. The impacts of the economic structural adjustment programmes of the 1980s, and of the economic and political crisis of 1997/98 have already been mentioned. In Section 4.4 the events of the period 1990 to 1997 are presented, and several other decisions and impacts are reviewed. There is also a discussion of whether the Ministry of Finance and the Presidency should be seen as actors in the forest policy domain or whether their actions should be seen as originating in other subsystems.

4.4 THE INDONESIAN FOREST POLICY DOMAIN

To apply the ACF, it is necessary to discuss the structure of the policy domain and the beliefs, resources and strategies of the actors. It is assumed that coalitions of actors seek to translate their beliefs into public policies or programmes and that their ability to achieve this objective is constrained by the resources at their disposal. Although coalitions of actors will seek to increase the

resources available to them, and to engage in policy learning, the ACF argues that major changes in the distribution of political resources will usually be the result of events that are external to the domain (Sabatier 1993: 29-35).

4.4.1 Structure of the Domain

A policy domain is a set of actors with major concerns about a substantive area whose actions and preferences on policy events are taken into account by other domain participants (Laumann and Knocke 1987: 10). Delineating domain membership is a rather empirical exercise, which takes into account the fact that domain boundaries are not rigid (Knocke 1990: 163-4). The exercise is carried out by a combination of document analysis and interviews. For the Indonesian forest policy domain the most influential actors were identified from interviews (see Table 11, Annex 4.2A) as:

- the Ministry of Forestry;
- the private sector; and
- the Presidency.

Least influential actors include:

- Indonesian NGOs
- local communities; and
- academics (mainly economists and foresters).

A number of other actors can be identified from the literature:

- the Ministry of Home Affairs (to which the provincial Forest Services report);
- the Ministry of Finance (responsible for revenue collection and budgetary allocations);
- the National Planning Agency (responsible for preparing and monitoring the implementation of the five-year economic plans or REPELITAS);
- the Ministry of the Environment;
- the National Environmental Impact Management Agency (BAPEDAL);
- international research and funding organisations such as FAO, ITTO, CIFOR and

the World Bank, coordinated through the Consultative Group; and

- international NGOs.²⁰

The research carried out for this thesis (see Table 11, Annex 4.2A), and articles by foreign observers (e.g., Gillis 1988; Richardson 1990; Ascher 1993; Barber *et al.* 1994) suggest that the forest policy domain in Indonesia is dominated by two major actors who together form the dominant advocacy coalition, referred to here as the Forestry Coalition. These are the Ministry of Forestry and the private sector. An advocacy coalition is made up of actors who share a belief system and show a degree of coordinated activity over time (Sabatier 1993: 25).

The Ministry has a clear, legally established role as steward of the country's forests, as discussed in Section 4.2.4. The private sector is well organised through various industry associations under the umbrella of the Indonesian Forest Community (MPI) and its influence has been recognised in official publications (e.g., GOI/FAO 1990: 147). With the possible exception of the President, whose role is discussed further below, none of the other actors appears to enjoy the same level of influence over the domain as the Ministry of Forestry and the private sector.

In terms of structure, a policy domain dominated by two actors could be classified as statist, corporatist or clientelistic. Statism is characterised by strong state intervention without the involvement of social actors (van Waarden 1992), which is not the case in Indonesia. Corporatism is a concept that has been subject to diverse definitions but van Waarden distinguishes it from clientelism and pluralism in that actors from civil society become involved in policy implementation and acquire public authority to do this. Again, this is not the case in Indonesia. Finally, clientelism is described by van Waarden as existing when an actor or interest group becomes the natural expression and representative of a sector in the view of a government agency, and therefore becomes the reference point for the activity of the agency:

this monopoly of representation tends to result in 'capture' or 'colonisation' of state

agencies by the organized interests. It will make the state agency more dependent on the interest organization... when a sector is organized in only one association instead of many, this organization will tend to be greater, have more resources, more expertise and may be a more disciplined organization. (van Waarden 1992: 43).

This is a good description of the situation in Indonesia with the MPI, the influential umbrella organisation of the private sector, being the influential association, and we can conclude that the Indonesians forest policy domain is a textbook example of clientelism.

Clientelism can lead to state agencies defending particular interests rather than broader public interests, even leading to a situation where public policy is taken over by the private policy of the "client". There is a preference for informal negotiations and secrecy. The state agency will usually remain responsible for policy formulation and implementation but will do so in close collaboration with its "client", which has institutionalised channels of access (van Waarden 1992: 44). This can give the relationship "a taint of illegality" (Peters 1989: 164) among the general public. Van Waarden (1992: 44) goes further than this and states that:

the close cooperation of state agency and clientele in pursuing particularistic interests may produce various 'robber coalitions' against other networks of agencies and their clientele, will tend to fragment the state organization, frustrate attempts to formulate policies in the general interest, and will reduce the coherence in general government policy.

²⁰ The distinction between international and domestic NGOs is not rigid. For example, WWF is an international NGO with an office and programme in Indonesia; WALHI is an Indonesian umbrella NGO affiliated with Friends of the Earth; and the Indonesian Tropical Institute (LATIN) is an Indonesian NGO that receives funding from WWF and other international sources. In general, Indonesian NGOs are small and poorly funded but well informed about international developments through E-mail and the Internet. They collaborate through umbrella organisations such as the Indonesian Network on Tropical forest Conservation (SKEPHI) and WALHI.

It can be seen from publications by foreign observers (e.g., Gillis 1988; Repetto 1988; Ascher 1993), Indonesian NGOs (e.g., SKEPHI 1990; Ahmad 1995), and the answers of some of the NGO, academic, international organisation and certifier respondents interviewed for this thesis (see Table 1, Annex 4.2A), that many observers outside the government and private sector, do see a situation in the Indonesian forest policy domain similar to that described by van Waarden. This confirms the diagnosis of a clientelistic situation. After Suharto's resignation in May 1998, his regime was widely criticised by Indonesian and foreign observers for corruption (IHT 1998), providing further confirmation of this assessment.

Fragmentation of State organisation and cooperation between the Ministry of Forestry and the private sector in pursuing particular interests are mentioned in a review of Indonesian forest policy by Ascher (1993: 7) who argues that the President is also a member of the Forestry Coalition and that there is a second advocacy coalition in the domain:

The explanation begins with...competition over control of the disposition of the natural resource rent of Indonesia's forests. Indonesian forestry policy is the outgrowth of an intra-governmental struggle that often pits the Forestry Ministry and the Presidency against the conventional central decision makers in allocating state resources, namely the Finance Ministry and the National Planning Agency...the latter have been joined by the Environment Ministry.

Ascher argues that the Ministry of Forestry consistently tries to maintain its authority over the forested portion of Indonesian territory, because this gives it a *de facto* role as the national development authority in sparsely inhabited areas such as Kalimantan, Irian Jaya and Sumatra. In addition, the Ministry seeks to control the allocation of revenue from forest exploitation. The Presidency benefits from the current situation by being able to influence the allocation of forest concessions to political supporters (Schwartz 1994: 140-2) and by having access to the resources

of the Reforestation Fund for various purposes, for example, a controversial investments for development of an Indonesian passenger aircraft (Prasetyohadi 1996; EIU 1997b).

On the other hand, the Finance Ministry would prefer to control the allocation of forest revenue itself and the National Planning Agency would like to have greater influence over land-use planning on forest lands and the use of forestry revenue. The Environment Ministry has no real influence on forest exploitation and is concerned about the environmental impacts of forestry.

The exact role of the President in the forest policy domain is hard to determine. In research carried out for this thesis, neither respondents from the government nor those from the private sector mentioned the Presidency as influential in forest policy, whereas other respondents did (Table 11, Annex 4.2A). Some of the leading members of MPI have developed close relations to the President over decades (Ascher 1993; Durand 1994: 289-92; Schwartz 1994: 140). The President of MPI was recently quoted as saying "I have been friends with the President for more than 40 years" (IHT 1997b).

There are many aspects of Ascher's account that cannot easily be confirmed, particularly concerning the role of the Presidency in the forest policy domain. It should be noted that Ascher's analysis has not been well received in Indonesian governmental circles (W. Sunderlin, personal communication, December 1996). However the existence of a second "Ministry of Finance Coalition" made up of this Ministry, the Ministry of Environment and the National Planning Agency can be surmised, and as more information becomes available after Suharto's resignation it is likely that Ascher's views will be confirmed. Support for the view that the Ministry of Finance is an actor in the forest policy domain can be found in some of the provisions accompanying the World Bank/IMF rescue package which included transferring control of the reforestation fund from the Ministry of Forestry to the Ministry of Finance (CIFOR 1998). This development will substantially strengthen the role of the Ministry of Finance in the forest policy domain, and could presage additional changes in future.

It is argued in this thesis that Indonesian and international NGOs and international organisations, such as the World Bank, CIFOR and to a lesser extent FAO, constitute a third “Environmental Coalition”. These organisations share a common set of beliefs about the policy problems facing forestry in Indonesia, even if they have not always acted as a coalition. From studies of documents on forest policy in Indonesia, the coalition appears to be led by the Indonesian umbrella NGO WALHI, and the main international organisation involved is the World Bank. It may seem curious to group NGOs such as WALHI and international organisations like the World Bank in the same coalition but there are three arguments for doing so. The first is based on a historical review of events, the second on content analysis of key documents and the third on responses to the interviews carried out in research for this thesis.

Deforestation and forest degradation in Indonesia and the policy and market failures underpinning them, were discussed in a policy review published by the International Institute of Environment and Development (IIED) in collaboration with the Department of Forestry, the Department of Home Affairs and the Ministry of Population, Environment and Development in 1985 (GOI/IIED 1985). They were further analysed and discussed in a series of reports prepared by the Ministry of Forestry and FAO for the Indonesian Forestry Action Plan (e.g., Arnold 1990; Chandrasekharan 1990; GOI/FAO 1990; Richardson 1990; Zerner 1990). Although the tone of the GOI/FAO reports was diplomatic, a number of the criticisms originally raised by NGOs and foreign observers were included (e.g., Repetto and Gillis 1988; Hurst 1990; SKEPHI 1990; Potter 1991; WALHI 1991), together with suggestions on how to address the problems.

Since the early 1990s, international organisations, such as the World Bank and FAO, also began to express concern about deforestation and forest degradation and pointed out early signs of wood shortages. (e.g., World Bank 1995: 2). Throughout the 1990s the GOI/FAO reports were informally disseminated (they were not widely available in Indonesia), and Indonesian academics

began to publish critical articles and reports on forest policies in Indonesia (e.g., Soemitro 1994, 1995, 1996; Adiwoso 1996).

By the first part of the last decade, NGOs, the World Bank and some Indonesian academics seem to have come to a similar view of the main problems in the Indonesian forest sector. This involved some changes in attitude, as in the case of the World Bank, which has been described in the following way:

It is noteworthy that there has been a “sea change” in the posture of the World Bank, one of the key formal actors in the debate. In 1990, the World Bank estimated the annual rate of deforestation to be between 700,000 and 1,200,000 ha, viewed smallholder conversion as accounting for 350,000-650,000 of the total, and underscores its concern about shifting cultivation. In 1994, the World Bank identified management of forest concessions in the outer islands as one of the “highest priority” environmental issues facing the country and notes that the role of swidden agriculture in deforestation has been over-emphasized in previous studies (Sunderlin and Resosudarmo 1996: 2-3).

The reasons for this change in attitude may include the realisation by Bank analysts that Indonesia faced timber shortages (changes in a relatively stable parameter in ACF terms; see World Bank 1995). Policy learning has also occurred in the Bank, associated with the development of the new World Bank forestry policy in 1991 (World Bank 1991), with exposure to analyses of the situation in Indonesia by NGOs and foreign observers, and with the Bank hiring a number of critical social scientists in its Washington, DC headquarters since the early 1990s.

Content analysis of two key documents also shows the similarity of views between the World Bank and the Indonesian NGO WALHI. In separate analyses of the problems facing commercial forest management in Indonesia (WALHI 1991; World Bank 1995), the following problems are identified: forest tenure; unsustainable harvest levels;

inadequate revenue collection; forest conversion for plantation establishment; economic inefficiencies of log export restrictions; and social problems with forest management.

Finally, the responses to the interviews carried out for this thesis show a number of similarities of views between NGO, international organisation and academic respondents. For example, Tables 6 and 8 (Annex 4.2A) show that respondents from these groups consider that policy reform is needed in the forest sector, contrary to the views of Ministry of Forestry and private sector representatives.

Two policy brokers can be identified in the forest policy domain. The first is Dr Emil Salim, whose long experience in governmental and non-governmental circles allowed him to play a key role in shaping the Indonesian forest certification programme. The second is Natural Resources Management Project (NRMP; a joint activity of the US Agency for International Development, the National Planning Agency and the Ministry of Forestry). NRMP has offices in the Ministry of Forestry and commissioned key research work on certification, which was instrumental in shaping the Indonesian Ecolabelling Institute (LEI) programme (Bennett *et al.* 1997). NRMP was well placed to play the role of policy broker since it included actors from two distinct coalitions and thus constituted a bridge between them.

4.4.2 Actors' Beliefs

4.4.2.1 Belief System of the Forestry Coalition

In the ACF, belief systems of actors are seen to have a three-level structure: a deep normative core, a near policy core and secondary aspects. The deep normative core is highly resistant to change and reflects fundamental values. The policy core applies to fundamental policy positions and can be subject to change, although this is difficult. Secondary aspects are specific to the policy domain in question and deal with instrumental aspects necessary to implement the policy core. They are relatively susceptible to change, and it is at this level that most policy-oriented learning occurs (Sabatier 1993: 31). The

following discussion focuses on the near policy cores and secondary aspects because of their relevance for policy change.

The belief system of the Forestry Coalition can be deduced from the interviews (Tables 1, 2 and 3, Annex 4.2A), various governmental publications (notable GOI/FAO 1990; MOF 1995a) and reports from the private sector (e.g., Hasan 1991, 1992). It appears that the coalition's belief system stresses:

- 1) the primacy of forest exploitation over forest protection;
- 2) a preference for centralised control of forest management rather than delegation to provincial authorities;
- 3) a reluctance to recognise the legitimacy of traditional use of forests by local communities;
- 4) a perception that these communities are often responsible for deforestation;
- 5) a perception that forestry will be increasingly based on plantations for the pulp and paper industry in the future;
- 6) a view that NGOs have tended to exaggerate the importance of social and environmental problems in forestry, although these problems do exist; and
- 7) a preference for "command and control" policy instruments, rather than economic incentives or market instruments.

4.4.2.2 Belief System of the Ministry of Finance Coalition

Outlining the belief system of the second Advocacy Coalition is a somewhat speculative activity because the only published information is by Ascher (1993). It is therefore not possible to independently confirm his analysis, although as mentioned above, recent events in Indonesia provide some support for his views.

Ascher claims that there are disagreements about how forest resources should be used between the dominant coalition and the second coalition, and states that the policy of the President and the Ministry of Forestry has generally been to encourage rapid forest exploitation, to generate capital for investment in forest-processing industries and for diversification of the economy.

The other coalition, led by the Ministry of Finance, does not appear to believe that neither the rapid exploitation of Indonesia's forest capital, nor the priorities for investments of the proceeds, are optimal. As Ascher (1993: 11) notes:

The Forestry Ministry's outlook emphasizes sectoral expansion rather than global efficiency, silviculture rather than economics, visible impacts (such as employment that could be clearly associated with government policy)... Conservation considerations seem to have little prominence. The Presidency, for its part, seems to share the concerns over visible impacts (especially employment creation)... and other patronage/political considerations, and expansion of industry... The strong economics orientation of the Finance Ministry and BAPPENAS [the National Planning Agency] also reflects the long tutelage of economics-orientated donor institutions including USAID and the World Bank. The Forestry Ministry, without much connection to such institutions has been less inculcated with the economy-wide efficiency orientation that marks the other two agencies.

Some supporting evidence for Ascher's analysis comes from the fact that the differences between the two coalitions he mentions reflect the technocrat-technologist debate mentioned in Section 4.3.3, with the Ministry of Forestry-led coalition playing a technologist role and the Ministry of Finance-led coalition adopting a technocratic approach. Ascher argues that the Ministry of Finance Coalition has a belief system that stresses the need for economic efficiency and more balanced and integrated planning of forest management.

According to Ascher, neither coalition is "watertight". The Ministry of the Environment does not always agree with the Ministry of Finance, and the President has sometimes sided with the Ministry of Finance against the Ministry of Forestry. For example in 1978, allegedly against the advice of the Ministry of Forestry, the President increased the export tax on logs and later increased the reforestation fee several times.

Following Ascher's reasoning, one could argue that the Ministry of Forestry is faced with a dilemma, which is as yet unresolved. It is increasingly recognised that current levels of forest exploitation are above sustainable levels (e.g., World Bank 1995: i). The Ministry's sources of revenue will drop if it forces concessionaires to reduce extraction rates, but if it waits until Indonesia's forests are so depleted that extraction levels fall because of inadequate resources, revenue will also fall. The Ministry would then risk public criticism for not having controlled deforestation and forest degradation, and the possible loss of its role as the *de facto* national development authority.

4.4.2.3 Belief System of the Environmental Coalition

Compared to the second coalition, it is relatively easy to document the apparent belief system of the third coalition (even if the views vary somewhat between members) because of the numerous publications by NGOs and international organisations (e.g., SKEPHI 1990; WALHI 1991; World Bank 1995). The belief system appears to stress:

- the need for more focus on forest protection and less on forest exploitation;
- a preference for more local control of forest management;
- a concern that forestry problems in Indonesia are serious and need urgent attention; and
- a perception that fundamental policy reform is required in this domain.

4.4.2.4 Summary of the Coalitions' Belief Systems

The policy core and secondary aspects of the Forestry, Ministry of Finance and Environmental Coalitions' belief systems vary (see Table 4.3 for a summary).

4.4.3 Actors' Resources

Resources are divided unevenly among the three coalitions. The Forestry Coalition can draw on the strong legal mandate given by the Constitution and the 1967 Basic Forestry Law to the Ministry

Table 4.3 Policy Core Beliefs and Secondary Aspects of the Three Advocacy Coalitions in the Indonesian Forest Policy Domain, 1996/1997

Policy Core Beliefs	Forestry Coalition	Ministry of Finance Coalition	Environmental Coalition
Definition of the problem	Need to maintain high levels of timber production from natural forests and plantations	Need to increase economic efficiency of forest sector and place forest management on a sustained yield basis	Forests are being overharvested and converted into plantations with negative ecological consequences and social impacts on local communities A transition to ecologically and socially sustainable forest management is urgent
Identification of social groups whose welfare is most critical	Forest industry, Ministry of Forestry officials	Government in general	Local communities Population in general
Orientation on substantive policy conflicts	Economic development based on forest production and investment in value-added processing. (this corresponds to the "technologist" view)	Need to promote economic development based on competitive advantages of Indonesia Forest sector needs to be modernised and liberalised (this corresponds to the "technocrat" view)	Need to focus on environmental protection and social justice
Basic choices concerning policy instruments	Command and control	Economic incentives	Preference for a mix of command and control, and incentive instruments
Desirability of participation by various segments of society	Participation should concentrate on those directly concerned: i.e., government officials representing the public interest, and the forest industry	There should be broader participation of government agencies in forest management and the government revenues from forestry should go into the national budget	Much broader participation from all groups in society is needed, especially local communities and indigenous peoples
Ability of society to solve problems in this policy area	No fundamental problems apart from inadequate Ministry of Forestry control over concessionaires, which could be solved by additional resources or certification	A policy of liberalisation and deregulation will ensure that market failures are reduced and the right economic signals are sent to concessionaires (this will facilitate improved forest management)	Fundamental reform of Indonesian society is needed to allow sustainable forest management to occur Our understanding of tropical ecosystems is incomplete and we need to adopt precautionary approaches in forest management

Table 4.3 *Continued*

Policy Core Beliefs	Forestry Coalition	Ministry of Finance Coalition	Environmental Coalition
Secondary Aspects			
Decisions concerning administrative rules, budgetary allocations, statutory interpretation and revision	Clear need for a comprehensive set of "command and control" regulations in forest sector	Sector should be deregulated and agencies such as APKINDO should have a more modest role	A mix of regulations and incentives are needed
Information concerning programme performance, seriousness of the problems, etc.	No major problems Forestry is making a significant contribution to the Indonesian economy	Forests are being overharvested (this poses significant problems in terms of economic efficiency)	Deforestation and forest degradation have reached crisis proportions Current programmes have failed to solve the problems

Note: In the ACF, the near policy core is difficult to change but this is possible if experience reveals anomalies. It is made up of fundamental policy positions concerning the basic strategies for achieving the normative axioms of the deep core. Secondary aspects concern instrumental decisions needed to implement the policy core, and are moderately easy to change.

of Forestry for the control of forests in Indonesia. In addition it includes the considerable economic power of the private sector in a context where the forest sector contributes over US\$9 billion per annum to the economy. To the extent that the President is seen as being a member of this coalition, its political and economic influence is further enhanced.

The resources of the Ministry of Finance Coalition are more limited, although the Ministry of Home Affairs has limited influence over forest management through the provincial forest services, and the Ministry of Finance and the National Planning Agency can exert some control over the Ministry of Forestry in terms of five-year plans and budgetary allocations.

The resources of the Environmental Coalition are both intellectual and financial although they have traditionally been more modest than those of the other coalitions. NGOs such as WWF-Indonesia have access to increasing levels of funding for policy and training activities. NGOs and academics have published widely on forestry in Indonesia and there have been some suggestions that the role of NGOs as "think tanks" is being recognised in Indonesian society (Sinaga 1996). International financing organisations like

the World Bank have had some policy influence because of the relatively large contribution made by foreign aid to the budget; approximately 15% of total government revenue comes from this source, almost all of which goes to project rather than programme aid (EIU 1997a: 15). In the forest sector, development assistance was US\$60 million per annum in 1996 (CGIF 1996: 2). Before the 1997/98 economic crisis, the policy influence of the World Bank appeared to be declining as Indonesia looked to the financial markets to gradually replace foreign aid as a source of capital. However the crisis has made Indonesia heavily reliant on the World Bank and the IMF to avoid defaulting on international debts. As a direct result, these agencies were able to impose a number of fundamental reforms in the forest sector, which they had been trying unsuccessfully to promote for several years (World Bank 1995; CIFOR 1998).

4.4.4 Current Policy Issues: Problem Definition

The differing, and even opposing, belief systems of the coalitions led to different positions being adopted on policy issues. The dominant coalition has the ability to "frame" the debate to a large

degree, that is, to determine which issues will be included in the policy agenda, and therefore which problems will be addressed. In 1995, the Ministry of Forestry identified the following as a number of policy issues “for the 1990s and beyond” as requiring attention (Table 4.4, including the views of the two other coalitions on these issues).

As certification is a tool with the objective of improving forest management, it is primarily the issues in this category that are relevant in the problem definition phase. In Indonesia, the inadequate concession policies, poorly defined boundaries, lack of monitoring of performance, and low rent capture by the Ministry of Forestry add up to generally low-quality forest management (with few incentives for concessionaires to improve forest management practices), and large profits for concession holders.

The Ministry of Forestry itself has conceded that forest management is characterised by “practices which are silviculturally unacceptable” (MOF 1995a: 19). The performance of concessionaires has been described by the Ministry as:

very disappointing and even irresponsible. Although this situation may be attributed to the inadequacy of proper field monitoring and controls, it also reflects the absence of a sense of “corporate responsibility” to the longer term interests of the country by the private sector (GOI/FAO 1990: 147).

Illegal activities are common and in 1990 only 4% of concessionaires were estimated by the Ministry of Forestry to be in full compliance with applicable regulations (MOF 1996). Since then, the Ministry of Forestry has taken stronger actions against illegal logging and other violations by concessionaires, and 100 concessions have reportedly been suspended or fined (EBRI 1994). In 1996, the Ministry reported that as a result of these measures, 25% of concessionaires were operating in a “good” manner (MOF 1996).

Log output from natural forests was estimated to be 33 million cubic metres per annum in 1995 (ITTO 1996: 60). Official statistics put the

figure at 26 million cubic metres for 1993 (EIU 1995: 36). The Ministry of Forestry has calculated that the annual sustainable yield from Indonesia’s natural forests is between 22 and 27 million cubic metres (MOF 1995: 6), leading the World Bank (based on its estimates of current log outputs) to forecast timber shortages by the year 2000 unless logging rates were reduced substantially (World Bank 1995: i). According to several foreign observers, excessive extraction levels are accompanied in many concessions by poor harvesting practices, which cause significant damage to the residual stand. This has negative consequences for biodiversity conservation and ecological processes (Gillis 1988; Potter 1991).

Forest management is seen by many actors as a problem area (Table 1, Annex 4.2A) and that a key issue is inadequate Ministry of Forestry control of concessionaires. Unlike the other policy issues discussed above, the responses are fairly similar between the Ministry of Forestry on one side and other respondents on the other. This relative convergence of views probably explains why a policy instrument such as certification, which is intended to improve forest management, has obtained relatively broad support in the forest policy domain.

Discussion of forest management would be incomplete without a reference to plantations. Commercial forest plantations, or Industrial Timber Estates, have emerged as an important component of Indonesia’s forestry and industrialisation policies since the early 1980s, although teak plantations on Java have existed for centuries (Durand 1993a). New plantations are expected to make up the shortfall of timber supply from declining natural forests, and serve as the source of raw material for the rapidly growing pulp and paper industry.

The Ministry of Forestry sees the future role of plantations in the following way:

Increasingly, timber supplies will be obtained from high-yielding plantations, estate crops and trees on non-forest lands. Total timber supply under sustained yield management from natural production forests could fall from around 31.4 million

Table 4.4 "Policy Issues for 1990s and Beyond" Identified by the Ministry of Forestry in 1995

General category of issues	Policy measures identified by Ministry of Forestry	Views of Ministry of Finance Coalition	Views of Environmental Coalition
Land classification	Increase efficiency in land use Identify improved mechanisms for land allocation	Ministry of Forestry controls too much land Land use classification and planning should be done by relevant Ministries collaboratively	More equitable and accurate land use planning should be done
Forest tenure	Reduce shifting cultivation Recognise and respect the values of local people Reduce encroachment into forest areas	Forest concessions should be allocated through auctions Concessionaires should face a system of checks and balances which encourages them to manage for sustained yield	Forest tenure reform is a vital issue The whole system should be reformed so that it is not just the forest industry which benefits and so that communities have an incentive to take care of forests as well
Forest revenue system	Generate income through non-damaging use of forests, e.g., ecotourism Enhance the social contributions of forest use	The forest revenue system should be reformed to significantly improve revenue capture	The forest revenue system should be reformed and incentives given to communities to manage forests well
Forest industry	Reduce the volume and increase the utilisation of logging and processing residues Promote the utilisation of lesser known species and smaller dimensioned materials Promote the utilisation of sustainable raw materials, e.g., waste paper	Forest industry should be liberalised and the log export ban and sawnwood export taxes removed or reduced APKINDO's role should be reduced	Log export bans should be lifted and the Ministry should control industry's environmental performance better
Forest management	Improve the forest management system Increase the contribution of non-timber forest products Ensure environmental stability Promote soil and water conservation Enhance the social contributions of forest use Provide adequate mechanisms to ensure people's participation in forestry	The harvesting level from natural forests should be reduced and concessionaires given economic and regulatory incentives to manage for sustained yield	The forest concession system should be completely overhauled and communities given a chance to have concessions Certification could help improve monitoring of forest management Logging rates must be substantially reduced
Forest plantations and the development of the pulp and paper industry	Increase the raw material from non-forest lands, e.g., plantations of coconut Establish and expand industrial forest plantations	Forest plantations should be developed in a planned manner	The conversion of natural forests to plantations is socially and ecologically unacceptable

Table 4.4 Continued

General category of issues	Policy measures identified by Ministry of Forestry	Views of Ministry of Finance Coalition	Views of Environmental Coalition
Protected areas	Establish protected area system to the maximum extent possible	No comment	Protected area system needs strengthening and expansion
Other	Respond appropriately to external pressures relating to global warming, anti-tropical forest products and protectionism in international trade		

Sources: Repetto and Gillis (1988); GOI/FAO (1990); SKEPHI (1990); IUCN (1991); Potter (1991); WALHI (1991); Durand (1993b); Barber *et al.* (1994); Soemitro (1994); MOF (1995:10-11); World Bank (1995); Carrere and Lohmann (1996); Goodland and Daley (1996); King (1996).

cubic metres in 1990 to about 25 million cubic metres in 2000 and 21 million cubic metres in 2030. This is due partly to the conversion of natural forests for agricultural purposes, transmigration settlements and timber estates. (MOF 1995a: 6)

Despite substantial subsidies from the Reforestation Fund estimated to be US\$425 per hectare (World Bank 1990: 14), and Timber Estate licence agreements, which allow clear cutting of natural forests to establish plantations under advantageous conditions, plantation establishment has fallen behind targets. It is estimated that approximately 1 million ha of commercial plantations will be established by 2000 (World Bank 1995: 8). Meanwhile the installed capacity of the pulp and paper industry has doubled in the period 1991 to 1995. Most of the pulpwood comes from natural forests because supplies from plantations are still inadequate (Widinugraheni 1996).

The social and ecological impacts of clear cutting natural forests and replacing them with monocultures of *Acacia mangium*, *Paraserianthes falcataria* and *Eucalyptus spp.* have been strongly criticised by local and international NGOs (WALHI 1991; Carrere and Lohmann 1996: 211-28) and reservations have been expressed by the World Bank (1995: 8-9). It has also been argued that the short subsidy period of three years means that plantations may be established to obtain the subsidy and then abandoned, particularly if

plantation logs have to compete on the market with low-price logs from natural forests (Ascher 1993: 6-7). It has also been noted that the same concessionaires who benefit from the government's low concession rent capture may be subsidised again for their plantations, raising equity and efficiency issues. Concerns have further been expressed that corporations prefer to site plantations in natural forest areas to be able to use the first cut of timber to feed pulp mills and to avoid the difficulties of regenerating degraded lands, which are often colonised by *Imperata cylindrica* (Dick 1991).

The Ministry of Forestry has given no indication that it plans to reduce the rate of plantation establishment, but it did introduce a new regulation in 1990 providing for longer-term (35-year) concession rights for industrial timber estates. These are referred to as HPTI. The Ministry has also stated that:

the rules and regulations relating to industrial timber estates will be refined and completed to provide incentives for private sector investment, as well as facilities for local people and organizations to participate (MOF 1995a: 15).

It can be expected that plantation establishment and the development of the pulp and paper industry in Indonesia will lead to numerous controversies in the forest policy domain. However, when the research was carried

out for this thesis in 1996, only two respondents from international organisations mentioned problems in this area.

The discussion above suggests that by the early 1990s there was a broad recognition in the Indonesian forest policy domain that there were problems associated with commercial management of natural forests, and that it was important for the Ministry of Forestry to exert more control over concessionaires. There was not similar consensus on the need for action on other issues such as tenure reform or revenue policies.

If there was consensus on the need for changes in forest management, there appear to have been differences between actors on the nature of changes needed. NGOs and the World Bank called for fairly fundamental reforms, supported to some degree by FAO. On the other hand the Ministry of Forestry and the private sector wanted more modest measures, and took several initiatives in this direction. In 1989 the Ministry of Forestry instituted a “crackdown” on forest concessionaires found to be in violation of logging regulations, and in that year 48 concessions were cancelled and 37 had logging rights temporarily suspended. Fines totalling US\$4 million were levied (Hasan 1991). This can be considered to be an important “problem definition” event, which allowed agenda setting for the forest certification programme in Indonesia to begin. Overall, we can conclude that the major controversy in the domain, which has influenced the development of certification, is about the rate and manner in which forest resources are being exploited or converted, and who is benefiting from this.

4.5 THE DEVELOPMENT OF A FOREST CERTIFICATION PROGRAMME IN INDONESIA FROM 1990 TO 1997

4.5.1 Chronology of Events

The information provided by respondents and a review of the literature on certification in Indonesia has allowed the construction of the following chronology of events for the policy process in Indonesia concerning certification (Table 4.5).

These events are discussed below within the context of the ACF framework and the stages of the policy cycle. Three phases can be distinguished: first agenda setting, then programme development and finally, looking into the future, programme implementation.

4.5.2 Agenda Setting

Agenda setting occurs when an issue reaches the political agenda (Glück 1995: 59). The agenda-setting period for certification can be situated between 1990 and 1993. Interviews carried out for this thesis suggests that two external factors catalysed the current activities on certification in Indonesia (Tables 4 and 5, Annex 4.2A). The first was the adoption of “Target 2000” by ITTO at a Council meeting held in Bali in May 1990. “Target 2000” was a non-binding commitment made by the countries that were members of ITTO with the objective of:

...bringing all productive forest estates under sustainable management as soon as possible, so that, by the year 2000, the total exports of tropical timber products should come from sustainably managed resources (ITTO 1990a: 3).

At this meeting ITTO members also approved a set of *Guidelines for the Sustainable Management of Natural Tropical Forests* (ITTO 1990b) and agreed that producer members should develop national guidelines based on the ITTO model to encourage progress towards “Target 2000”. Neither “Target 2000”, nor the ITTO guidelines make reference to certification. However, both eventually served as “building blocks” for forest certification in Indonesia, with the guidelines providing a technical basis for criteria and indicators, and the year 2000 being seen by the Ministry of Forestry as the date by which the programme should be ready for implementation.

The second external factor was increasing pressure on environmental and social grounds coming from Indonesia’s export markets in Europe, and to a lesser degree the USA. As has already been discussed, beginning in the mid-

Table 4.5 Chronology of the Main Events Influencing the Evolution of Certification in Indonesia

Year	National events	International events relevant for the development of certification in Indonesia
1989	“Crackdown” on concessions violating logging regulations begins	Discussions at ITTO on a pre-project proposal to study feasibility of timber labelling
1990	Certification of Perum Perhutani plantations by SmartWood GOI/FAO forest sector reports published	Resolution approved by Austrian parliament calling for tropical timber importers to voluntarily restrict imports to those from sustainable sources ITTO Target 2000 adopted ITTO guidelines on sustainable forest management published
1991		Revised World Bank forestry policy supports certification Dutch parliament adopts 1995 target for sustainable timber imports
1992	APHI working group set up to prepare national and concession-level criteria for sustainable forest management	Initiative Tropenwald established in Germany; ITTO criteria for the measurement of sustainable forest management Austrian Law restricting tropical timber imports passed by parliament UNCED EU ecolabelling scheme initiated
1993	Mr Djamaludin Suryohadikusomo becomes Minister of Forestry SGS log-tracking project Draft APHI criteria and indicators circulated Ministry of Forestry issues decrees on criteria and indicators SGS/Ministry of Forestry Seminar on Certification Establishment of LEI working group	Austrian law modified FSC Founding Assembly
1994	Assessment of concessions using APHI criteria begins Development of LEI standards and proposals for structure of LEI Indonesia signs Biodiversity and climate conventions Seminar on certification held by LEI, CIFOR and FSC.	ITTO working party on certification meets and produces report Dutch 1995 target changed to 2000 CIFOR begins project to test various criteria (including LEI ones)
1995	Reassessment of Perum Perhutani begins APHI continues field assessment of concessions LEI begins field tests of criteria LEI/MOF MOU signed Proper Prokasih programme launched pollution monitoring Indonesian Tropical Forestry Action Plan published	CIFOR field test of criteria and indicators in Kalimantan followed by seminar on certification in Indonesia ISO/TC/207 rejects Canadian proposal to develop standard for forest certification EU adopts a timber protocol to Lomé convention mentioning certification

Table 4.5 Continued

Year	National events	International events relevant for the development of certification in Indonesia
1996	LEI criteria revised and further field tested	Second ITTO report on certification ITTC rejects funding proposal from LEI Discussions on certification at IPF and at intersessional conferences in Kuala Lumpur, Brisbane and Bonn
1997	LEI Criteria and certification system finalised and agreed with MOF and APHI, and the national standards body.	
1998	Indonesian Ecolabelling Foundation set up to implement certification programme on 6 February 1998	Discussions initiated between FSC and the Indonesian Ecolabelling Foundation on mutual recognition

Sources: Nugroho (1995) and interviews

1980s, environmental NGOs in Europe began making calls for boycotts of tropical timber by individual consumers and in public construction. This began with Friends of the Earth in the UK in 1984 (Dudley *et al.* 1995: 109), and eventually led to bans on the use of tropical timber in public construction in various municipalities in Germany, Holland, the UK and the USA (ITTO 1992: 17). These were probably an irritation to Indonesian exporters but are unlikely to have had significant impacts because the volumes of timber involved were small. The situation became more serious however, in June 1992, when the Austrian parliament passed the *Federal Act on the Labelling of Tropical Timber and Tropical Timber Products as well as the Creation of a Quality Mark for Timber and Timber Products from Sustainable Sources*. This Act made labelling of tropical timber obligatory in Austria (Rametsteiner 1994: 1). Again, the volume of timber involved was insignificant, as Austria imported only 1000 cubic metres of tropical timber in 1993 (ITTO 1996: 79). However, judging from the reaction of the Indonesian government, the Austrian decision was worrying, probably because this was a decision by a national government, not just a municipality. Also in 1992, two voluntary forest certification initiatives got under way: Initiative Tropenwald in Germany and the Forest

Stewardship Council. Finally, the European Union launched the EU ecolabel in 1992.

These two factors were linked because the ITTO Target 2000 had been developed partly in response to pressure from NGOs such as WWF and Friends of the Earth, which were active participants in ITTO meetings at the time (Humphreys 1996: 68). In 1989, WWF had established a similar target to ITTO, but with the target date of 1995 (WWF 1991). From an ACF perspective, both can be classified as External System Events. The ITTO targets can be viewed as indicating a change in public opinion and market pressures are a combination of changes in socioeconomic factors and public opinion. It is External System Events which are considered by Sabatier (1993: 20-1) as the most likely to encourage policy change.

There was a dual response from the Forestry Coalition in Indonesia. First, the government, in collaboration with Malaysia and other tropical timber exporters mounted a vigorous diplomatic offensive against the Austrian act in various fora including ITTO. In November 1992, Mr Djamaludin (who was shortly thereafter to be named Minister of Forestry) led the Indonesian delegation to the thirteenth session of the International Tropical Timber Council and spoke strongly against the Austrian law (ITTO 1992: 18). International pressure on Austria, and

the threat of a formal complaint to GATT, led to the revision of the Act in the spring of 1993, removing the obligatory nature of the timber labelling and extending voluntary labelling to cover temperate and boreal timber (Rametsteiner 1994:1).

The second response marked the beginning of the development of a forest certification programme in Indonesia. Unfortunately there are no detailed, publicly available documents on the early stages of this process, so the following account relies largely on information from interviews, which is cross-referenced to various publications by Indonesian authors.

In 1992, MPI created a working group to develop Indonesian criteria for sustainable forest management. This was announced by the chairman of MPI, Mr "Bob" Hasan, in a speech in November 1992, stating that "MPI has initiated the establishment of a committee for the formulation of sustainable forest management guidelines for Indonesia" (Hasan 1992: 3).

The group was coordinated by APhi. The APhi group was chaired by Professor Soerianegara from the Agricultural University in Bogor, and included academics and representatives from concessionaires, the Ministry of Forestry and the Ministry of the Environment. The working group focussed on developing criteria based on ITTO criteria. Preparatory work on this had apparently started informally within MPI in 1990 after the ITTO meeting in Bali. However, it was in 1992 that the group was formally constituted and the link made between criteria and certification. The analysis of MPI seems to have been that the development of criteria for sustainable forest management and timber labelling were going to be inevitable in future, and that it should take the lead in developing these criteria rather than run the risk of having them imposed on concession holders.

The link between the market conditions facing Indonesian exports and the development of certification has been described by one Indonesian analyst, who was close to NGOs, as:

Indonesia, with more than half of its non-oil exports depending on the above eco-sensitive products [timber products, garments, textiles, footwear, pulp and

paper], is trying to pre-empt the importing country actions by embarking on an ecolabelling scheme. Timber and timber products that contribute about a quarter of the total export is the first product category to be secured in the market. Although East Asian markets absorb half of the current Indonesian exports, its dependence on the eco-sensitive markets of Europe and America is also high. Indonesia cannot afford to lose 40% of its woodworking product and furniture markets, 21% of its plywood markets and 28% of its sawnwood market. These shares will at least double if the currently dualistic markets of Singapore and Japan join the green timber markets. All these, plus the opportunity to open niche green timber markets for high value added timber products, become a good reason for Indonesia to prepare its timber certification system (Ahmad 1994: 24).

Following this logic, it can be argued that the Austrian law, which followed NGO calls for boycotts of tropical timber, and the 1990 dispute with the EC over the log export ban (Humphreys 1996: 76), raised concerns in the Indonesian government and timber trade. The fact that almost 40% of total Indonesian exports are in product categories likely to be affected by ecolabels (see Section 4.3.2) may have also been a factor. Although Ahmad's arguments are persuasive, it is interesting to note that Malaysia, a regional competitor of Indonesia in tropical timber markets, was also faced with the ITTO target and market pressures, but did not start work on a certification scheme until several years after Indonesia. Initially, the Malaysian government and timber industry expressed strong reservations about certification (Min 1995: 32). Malaysia's initial position may be explained in part by the fact that, in 1991 and 1992, it was involved in confrontations with international NGOs over logging in Sarawak (Gale 1996: 343-64), and with the EU and Canada over the proposed Global Forest Convention (Humphreys 1996: 83-103). At this time the political climate in Malaysia was probably not favourable for the acceptance of

ideas like certification which had initially been proposed by NGOs.

In two articles published in 1996, representatives of the Indonesian Ecolabelling Working Group (LEI; see Section 4.5.3) representatives outlined the views of an academic (Adiwoso 1996) and a certifier (Suntana 1996) on why certification began to develop in Indonesia. According to these authors, Indonesia adopted a proactive approach to certification rather than waiting for the emergence of an international consensus on criteria and indicators for three reasons. First, if Indonesia was to remain a major forest products exporter, it needed to be able to anticipate changes in international trade, rather than just adapting to them. In other words, if certification is on the way, the Indonesian timber trade preferred to be a market leader, participating in shaping the system, rather than having to adapt to a system once it is established. Second, there is a need for additional mechanisms for evaluating the quality of forest management in Indonesia, and this is fully recognised by the Ministry of Forestry. Thirdly, increasing pressures from Indonesian civil society:

will impel the business community to reshape their management practices. Environmental and social concerns will become long-term corporate issues for many business enterprises particularly in the forestry sector (Adiwoso 1996: 34).

It has been argued (Ghazali and Simula 1994: 37) that a domestic event favoured the development of certification in Indonesia: certification of the teak plantations of Perum Perhutani (the State forest corporation, a branch of the Ministry of Forestry) in Java which cover 2.8 million ha. The certification was carried out by SmartWood in 1990.²¹ There is little information available on how SmartWood conducted the certification evaluation, but since it was the organisation's first ever certification exercise, it seems fair to assume that procedures may not yet have been fully developed. After the certification, Perum Perhutani's social and environmental performance was criticised (e.g.,

Peluso 1992). In 1996 and 1997, SmartWood and Perum Perhutani were discussing conditions for the renewal of the certificate, which lapsed at the end of 1995, having been issued for five years in 1990.

Irrespective of these problems, research for this thesis indicates that the Perum Perhutani certification did not have a catalytic effect on the development of certification in other parts of Indonesia. It was not noted as a reason for the emergence of certification by any of the respondents (see Table 4, Annex 4.2A), even though one of them had actually worked with SmartWood on the evaluation in 1990. The main reason for the absence of a link between this certification and later developments is probably to be found in the many ecological, silvicultural and administrative differences between teak plantations in Java and natural forest concessions in the "outer islands". Historically, as timber exploitation developed in the "outer islands" little effort was made to draw on the long experience of forest management in Java, because the conditions were so different (Durand 1993a,b). As an example of this, even today the forests of Java are not included in the national forest inventory (GOI/FAO 1996: 31), and plantation management in Java and natural forest management in other parts of the country are seen by all actors as totally separate issues.

A more significant domestic event is the nomination of Mr Djamaludin as Minister of Forestry in 1993. Several NGO and international

²¹ Perum Perhutani was set up in 1978 with the objective of managing all forests in Java for both social welfare and profit. Production forestry is based mainly on teak plantations. The corporation has sawmilling facilities and is also involved in furniture manufacturing. In 1995, 45% of exports went to Western Europe, 30% to the USA and 20% to Asia (Perum Perhutani 1995: 2, 20). An official from the company interviewed for this thesis stated that Perum Perhutani's interest in certification came from the fact that the corporation was exporting to "ecosensitive" markets. An additional factor was the desire of the corporation to distinguish its teak products from those produced by the country of Myanmar, which has been criticised on human rights grounds. From Perum Perhutani's perspective, certification has been beneficial in terms of increasing market share in the USA.

organisation representatives interviewed stated that in their view his appointment signalled concerns by the President about forest depletion and the beginning of a movement in the Ministry towards a more balanced approach between forest exploitation and forest conservation. It was not possible to interview Mr Djamaludin himself (although his personal advisor was interviewed) but his actions following his appointment give some support to these views. He maintained and even strengthened the “crackdown” on concessions violating regulations (Table 2, Annex 4.2A; Kleinwort Benson Research 1996), and supported the development of certification (Djamaludin 1994). He also ordered several external audits of Indonesian forest products companies, which were seeking listing on the stock exchange (e.g., SGS 1994).

The creation of the APhi working group is considered to mark the end of the agenda-setting process. Up to this point it can be observed that the timing and content of activities in the policy domain had been largely initiated and controlled by the members of the Forestry Coalition. However these activities were initiated in response to changes in public opinion (External System Events in the ACF model), caused in part by actors from the Environmental Coalition. In turn, members of this coalition were reacting to deforestation and forest degradation in Indonesia, which can be classified as a change in the basic distribution of natural resources, a relatively stable parameter in the ACF model. Finally it can be argued, that it was the very policies and practices of the dominant coalition members, influenced by their belief systems, which led to forest degradation and deforestation.

It should be noted that contributions to deforestation and forest degradation by concession holders appear to constitute a modification of a Relatively Stable Parameter by an actor in the policy domain. This is not envisaged in the ACF where actors are influenced by External System Events and Relatively Stable Parameters, not the converse. There are a number of theoretical implications of this anomaly, which are discussed in Chapter 7.

We can also detect a process of policy learning through the publication of various GOI/FAO reports as part of the Tropical Forests Action Programme (TFAP) process (e.g., GOI/FAO 1990; Richardson 1990) and WALHI’s (1991) economic analysis of forest management.

Thus, even if the Forestry Coalition maintained its control over the domain, at a period when there was little sign of activity by the Ministry of Finance Coalition, the Environmental Coalition had begun to exert some influence over the issues entering the policy agenda. In addition, the “crackdown” on concessionaires initiated by the Ministry of Forestry in 1989 had the potential to cause divergences between the two partners in the dominant coalition. In short, the dominant coalition appeared to be weaker in 1993 than it had been in 1990.

4.5.3 Programme Development

The programme development phase began in 1993 and was complete at the end of 1997 when the Indonesian forest certification programme was finalised. In 1993, the APhi working group produced drafts of two sets of criteria for the assessment of sustainable management of natural tropical forests. The first, based on the *ITTO Guidelines* (ITTO 1990b) and the *ITTO Criteria for the Measurement of Sustainable Tropical Forest Management* (ITTO 1992), dealt with national-level criteria (APhi 1993a). The second was also based on ITTO guidelines and criteria, as well as draft FSC Principles and Criteria, and some criteria produced by the WWF Indonesia programme (APhi 1993b). Field tests of the second set of criteria were carried out on several concessions in Sumatra and Kalimantan. Also in 1993, SGS Silviconsult began a project to test the feasibility of tracking timber all the way from a concession in Indonesia to an end-user in the UK. This project was carried out in collaboration with APhi and the Ministry of Forestry, with EU funding (SGS 1994).

The Ministry of Forestry took two key decisions in 1993 as a result of the activities of the working group. First, a Ministerial Decree (MOF: 1993) was adopted in April on *Criteria*

and Indicators for the Sustainable Management of the Natural Production Forest. The decree specified that the management of natural production forests would be considered sustainable if it complied with specified national-level and management unit-level criteria and indicators. These were similar to those in the APHI draft documents and the ITTO guidelines, and covered forest resources, forest production, conservation, socioeconomic issues and institutional aspects in a rather general manner.²²

The decree did not specifically mention certification as a tool to assess the sustainability of forest management, but Article 3(5)d on institutional aspects refers to “the establishment of a control institution as needed”.

Ministry of Forestry officials interviewed during research for this thesis confirmed that this Article was included to allow for the possibility of independent inspections of concessions and certification. If this is indeed the case, this decree marks the first official reference to certification by the Ministry of Forestry. The fact that this reference comes in a Ministerial Decree rather than a speech or article, suggests that the policy process to that date had been conducted in a rather confidential manner between the actors of the dominant coalition without any broader public debate.

A second decision was taken more informally by the Minister of Forestry in 1993, when he announced at a seminar on certification organised by the Ministry and SGS-Silviconsult in September that he supported the idea of certification and that it should be independent to be internationally credible. This appears to have been an indirect criticism of the APHI working group (J. Centeno, personal communication, December 1994). After the seminar, the Minister announced that he had asked Dr Emil Salim, former Minister of the Environment and Member of the Brundtland Commission to establish an independent body – the Indonesian Ecolabelling Institute (LEI) – to control certification. This began to take shape in early 1994 on the basis of a Memorandum of Understanding signed by Mr Djamaludin and Dr Salim, which apparently provided for US\$500 000 funding from the

Ministry to the LEI working group, and quarterly progress reports from the group to the Ministry.

This second decision is significant because it marks a change in attitude by the Ministry of Forestry towards collaboration with NGOs. For example, during the Indonesian TFAP meetings in 1990, Indonesian and international NGOs had considerable difficulty in getting access to documents and participating in meetings (Barber *et al.* 1994: 76). These NGOs, together with a group of young foresters and economists from the University of Jakarta and the Agricultural University in Bogor constituted the LEI working group.²³

Why did the Ministry of Forestry take this decision? Two reasons can be suggested: international credibility and the potential loss of power of the Ministry of Forestry to the private sector. It is probable that the Minister felt that, while the APHI C&I were acceptable, “self-assessment” of concessions by APHI was not going to be credible internationally. This was certainly an accurate appraisal of the international situation. An additional consideration for the Minister may have been that certification by APHI could give too much power to the private sector at the expense of the Ministry of Forestry. It is as if the Ministry realised that what was an effective response to

²² The decree does not include any specific performance levels. For example, the indicators for sustainable forest production are: a) history of forest management is well recorded; b) felling rotation is commensurate with forest potential; c) silvicultural system is commensurate with forest type; and d) target regulation and product utilisation have been determined compatible with variation of the forest resource.

²³ In 1994 the membership of the group was as follows: Dr Emil Salim, Chair; Dr Riga Adiwoso, Professor of Economics, University of Jakarta; Ir Hariadi, PhD candidate in forest policy, Agricultural University of Bogor; Ir Haryanto, Agricultural University of Bogor; Ir Zaim Haidi (NGO); Ir Asep Suntana, RMI-Indonesian Institute for Forestry and Environmental Research, an NGO; Ir Tri Nugroho, LATIN, Indonesian Tropical Institute, and NGO, and Ir Mia Siscawati, RMI (LEI 1994: 5). From 1994 to 1997 the membership of the group was essentially the same with one NGO representative (Nugroho) being replaced with another one.

international pressures in the agenda setting stage, could become a problem for the Ministry if it actually got to programme implementation. In this sense, the success of the APhi working group became a problem for the Ministry.

For the Ministry of Forestry, the risk of involving Indonesia's NGO sector in the development of the certification system probably appeared minimal, because Dr Emil Salim had been a government Minister himself and maintained close links to government. In addition, the framework for the criteria to be used in certification had been specified by the 1993 Ministerial Decree 252. Thus NGOs would not be able to introduce social and environmental issues from their belief systems, which the Ministry did not agree with. In addition, Ministry funding for LEI's activities gave it a further measure of control.

However, the NGOs were interested in certification precisely because they saw a chance to introduce social and ecological issues into forest management, to support community forestry and to promote policy reform in the forest sector (Tables 5 and 6, Annex 4.2A). Also, under the leadership of Dr Emil Salim, LEI quickly raised additional funding of US\$500 000 for itself from the World Bank and began to develop a dialogue and alliances with international NGOs. The LEI working group was established with three objectives: to establish a set of criteria and indicators for sustainable forest management; to design a decision-making system for use in the forest certification process, and to prepare an institutional structure for the ecolabelling institute (LEI 1997b). The group had a small office in Jakarta, and a secretariat of two foresters and an economist supported by a secretary. One of the foresters was Mr Asep Suntana, who was also a member of the LEI working group. There appears to have been little contact with the APhi working group, and there was no cross-membership.

Meanwhile, after late 1993, the APhi initiative gradually evolved into an internal auditing system to help concessionaires to prepare for certification. It is not clear how this happened, or whether the private sector initially sought to

oppose the Minister's decision. A programme of assessments of forest management in concessions using the APhi criteria was put in place and a representative sample of 61 forest concessions were assessed in 1994 and 1995. Fifteen of these were considered to be "adequately prepared" to reach the ITTO Target 2000. APhi reported that concessionaires welcome these assessments "because of prestige and to keep in business" but also noted that "many factors related to their performance are beyond the control of management such as illegal removal and changing land use" (Soemitro 1996: 7). The general conclusion of APhi based on three years of field tests was that:

The assessment of forest concession (management unit) in general is feasible technically and manageable financially. It can increase motivation and improve the management if it is done properly. In many cases, the problem of sustainable forest management can be made easier if permanent land use of forest and resource security can be assured (Soemitro 1996: 8).

In 1995, APhi prepared draft criteria and indicators specially designed for use in swamp forests (APhi 1995). The following year, APhi produced revised criteria for use at the management unit level in the form of a questionnaire which can be more easily used for scoring performance in the field than the earlier version (APhi 1996).

Since 1994, LEI gradually became recognised by all parties as the future Indonesian forest certification programme. This was clearly stated by the representative of the Ministry of Forestry in a statement made to the ITTO working party on certification, which met in Colombia in May 1994. The representative did not mention the APhi programme, but introduced the activities of the LEI working group. He explained that Indonesia intended to have a certification programme in place to comply with ITTO's "Target 2000", and that the criteria would be based on those adopted by ITTO. He presented the 1993 Ministerial decrees as a concrete step in this

direction, and also said that the Ministry wanted to have a domestic certification system rather than relying on foreign programmes (ITTO 1994: 35).

A conference on certification was organised by the LEI working group, FSC and CIFOR in September 1994. The conference was attended by representatives from the Ministry of Forestry, the Ministry of Environment, the Environmental Impact Management Agency, the private sector, national and international NGOs, international organisations, certifiers and the Indonesian national standards body. The workshop was opened by the Minister of Forestry who made the following statement about certification.

Despite the fact that not all parties agreed on the criteria and indicators for the sustainability on a multilateral basis, the government of Indonesia has embarked on the preparation of a timber certification scheme. We certainly hope that timber certification and labelling could in fact contribute significantly to the achievement of SFM. It is conceivable that the international acceptance of a certification scheme would be facing a real challenge. The criteria of the measurement of sustainability itself requires a common denominator for all parties concerned. A workable assessment mechanism is yet to be defined, and the provision of true independent and credible assessors, certifiers and accreditors, requires a comprehensive analysis and sizable resources. In order to cope with this situation, I consider that the establishment of the Indonesian ecolabelling institute is timely, and the need for international cooperation and partnerships are indeed indispensable (Djamaludin 1994: 202).

At this conference Dr Emil Salim presented his view of certification, noting that “Ecolabel²⁴ is a guiding tool, it is not the goal of our effort. Ecolabel is like a thermometer indicating how sick or how healthy we are” (Salim: 1994: 206).

Salim remarked that certification was driven by three major forces: 1) the government, which was

committed to ITTO Target 2000; 2) APhi, which had been promoting the development of criteria and indicators for some time; and 3) NGOs, who were concerned about lack of sustainable forest management. He explained that LEI’s approach to sustainable forest management was based on relevant international sources including ITTO and FSC documents, and consisted of maintaining the production, ecological and socioeconomic functions of forests.

Draft LEI criteria and indicators were presented at the conference and there was discussion of the weighting that should be given to different criteria as well as how to separate issues that were the responsibility of the concessionaire from those that were the responsibility of the Ministry of Forestry. In general, the LEI criteria gave greater prominence to social and environmental issues than those of APhi. There were also extensive discussions about how LEI should be structured both to maintain both its independence and to be representative of the views of different interest groups. Finally the question of whether certification should be compulsory or voluntary was raised and Dr Salim indicated that the working group tended to be in favour of compulsory certification for all concessionaires.

In 1995, the LEI working group began field tests of its draft criteria and indicators on three concessions in Riau, East Kalimantan and Central Kalimantan, and also held consultations with APhi and the Ministry of Forestry. In early 1996, it designed the decision-making system for use in certification. During July and August of the same year, a full-scale field test of the LEI criteria and indicators was carried out on 11 concessions (in Aceh, North and West Sumatra, Riau, and East and West Kalimantan) by teams from 12 potential assessors, mostly from consulting firms, under the supervision of the LEI working group. By the end of 1996, the main elements of the LEI forest certification programme were in place and in April 1997 it was submitted to the Indonesian National Standards Body for approval as a national standard. Also in April 1997, a workshop was held

²⁴ Forest certification is often called ecolabelling in Indonesia

at which the Ministry of Forestry, APhi and LEI agreed that the criteria were acceptable. After the meeting, APhi Chairman, Hendro Prastowo announced to the press “The three agencies discussed ecolabelling in April and came up with a harmonized formula. It is based on sustainable forest management” (Jakarta Post 1997c).

Because of this agreement on the key issue of criteria and indicators, this workshop can be seen as marking a key point in the programme development phase, even though not all aspects (notably the chain-of-custody issues) were in place and further testing and refinements were planned. At a superficial level, the programme development phase appeared rather harmonious, with the Ministry of Forestry, the private sector and LEI representatives all agreeing in public that certification was a good idea and that Indonesia would move ahead in developing its programme even in the absence of an international consensus on criteria and indicators for certification. The debate on certification at the time was far more controversial in other countries such as Malaysia, the USA and the UK (Ghazali and Simula 1994).

Part of the reason for this apparent harmony was that, in the programme development phase, the Ministry of Forestry, the private sector and LEI all managed to protect their interests and there were no real “losers”. The private sector continued to develop and implement its internal auditing programme for concessionaires. Even if its programme was no longer **the** Indonesian certification programme, if the LEI initiative was not successful the APhi programme could always be used as a fall-back option. LEI developed its programme and was able to obtain financial support from the World Bank, collaboration with international NGOs and the FSC and the recognition of CIFOR (in that its draft criteria were included in a series of international tests starting in 1994). The Ministry was able to monitor both programmes and delay the potentially difficult choices that would have to be made at the time of implementation.

It is surprising, given the limited technical and financial resources of LEI, that the new institution was able to carry out the technical tasks involved in developing the programme, and the

political work at the national and international level to ensure a minimal level of support for its work. The fact that LEI was led by the experienced Dr Salim was no doubt critical in this respect.

It can be expected that as the programme implementation phase is approaching, some of the fundamental disagreements between interest groups, which were not apparent during the programme development phase, will come to the surface. In the programme development phase, there was only one relevant event, which originated with a member of the second coalition. At the end of 1995, the Environmental Impact Management Agency (BAPEDAL), announced the first results of an industrial environmental performance rating scheme called “Proper Prokasih”, which had been under development since 1994. The objective of the programme is to improve companies’ adherence to pollution regulations through periodic publication of the results of environmental investigations and audits by BAPEDAL. The Agency describes the programme as an information instrument and in the first round, 187 companies selected by BAPEDAL were assessed and classified into five levels of performance from gold to black (BAPEDAL 1995a,b). Proper Prokasih and LEI do not appear to be related in any way, but the development of the BAPEDAL programme is a sign that the use of market instruments for environmental management is gaining support in Indonesian government and business circles, which may have implications for forest certification.

The programme development phase can be considered to have concluded with the approval of Indonesian forest certification by the national standards body at the end of 1997.

4.5.4 Overview of the Programme

The problem to be addressed by the LEI certification programme is the poor quality of forest management in concessions in Indonesia, and the basic principles of the LEI programme have been defined as (LEI 1996; Suntana 1996):

- to function as an independent, non-profit, third-party certification body;
- to focus on implementing the criteria and indicators and procedures for certification

and making the final decision on issuing certificates;

- to ensure transparency throughout the certification process;
- to aim for mutual recognition of certification schemes internationally;
- to ensure that certification is seen as an incentive not a punishment for concessionaires; and
- to implement certification on a voluntary basis;

From the last point it can be seen that the working group has changed its view on whether certification should be voluntary or obligatory since 1994.

The LEI programme consists of the following elements (LEI 1997a):

- a procedure for the certification process;
- a logical framework for evaluating forest management;
- criteria and indicators for sustainable forest management; and
- an Analytical Hierarchy Process for decision-making.

It is intended to develop chain-of-custody procedures to track timber from the forest to the final customer and thus to allow product labelling, but these had not been developed by June 1998²⁵.

The programme will be implemented by certifiers, starting with LEI itself. It is possible that other certifiers, both Indonesian and international will also be allowed to carry out certification in Indonesia, provided they follow LEI procedures. The main target group of the programme are concessionaires and the goal has been defined as “To provide market or deregulatory incentives to improve forest management toward sustainable management practices” (Salim *et al.* 1997).

The LEI certification process, can be divided into four stages.

- 1) A preliminary assessment of the performance of the concession based on management plans and other documents. These documents are reviewed by the first certification panel,

which is a small group made up of LEI staff and consultants, and a decision is made whether to proceed with certification. If this decision is positive, the process moves into the next stage

- 2) Field assessment. A team of assessors with appropriate technical and regional experience visits the concession and makes a report to LEI. It should be noted that in the LEI system the assessment team cannot directly issue certificates. To avoid corruption or conflict of interest this is a role reserved for the LEI itself
- 3) Performance evaluation. A certification recommendation is made by the second LEI panel, based on the assessment report. This second panel is made up of the members of the first panel, with additional experts as necessary. If the recommendation is positive, a public consultation phase is begun, where the recommendations of the second panel are discussed with local stakeholders. If there are discrepancies between the views of the stakeholders and the second panel, a larger third panel bringing together the members of the first two panels and selected local stakeholders is convened.
- 4) LEI may issue the certificate (Salim *et al.* 1997).

LEI’s approach to certification is based on a “logical framework”. The framework is made up of two “dimensions” used to evaluate the quality of forest management in a concession. The first is the “sustainable forest management principles dimension”, which covers the outcomes or results of forest management. The second is the “management dimension”, which addresses the inputs or strategies used to achieve sustainable

²⁵ In 1999, LEI embarked on a programme of collaboration with FSC on the basis of “joint certification”. This required joint inspections of Indonesian concessions by teams from LEI and FSC accredited certifiers. LEI and FSC agreed that neither organisation would authorise certification of a forest concession unless the concession met the requirements of both systems. A side-benefit of joint certification is that certified Indonesian concessions could benefit from FSC’s chain-of-custody auditing systems.

forest management. The “sustainable forest management principles dimension” is divided into three functions – production, ecological and social. Similarly, the “management dimension” is viewed at three levels: forest resource management (at the level of the concession as a whole), forest stand management and institutional management. This framework has provided the basis for a set of criteria and indicators used for the evaluation of concessionaires’ performances in the field (Annex 4.3).

The final component of the LEI system is the use of the Analytic Hierarchy Process (AHP) for decision-making (Saaty 1995). AHP is used by the field assessors to assign weightings to the LEI criteria and indicators in the field, based on local social, ecological and economic conditions. This approach was preferred to the alternative of developing various sets of criteria and indicators for different regions of Indonesia (LEI 1997b: 11).

The result of a LEI certification assessment is a grade on the certificate. The highest grade (gold) is “Granted to a forest management unit that has implemented sustainable forest management and achieved balance in maintaining forest functions” (Salim *et al.* 1997: 3). Lower grades (silver and bronze) are given to concessions with weaknesses in one “sustainable forest management principle dimension”, but weaknesses in two dimension means that the concession fails.

4.6 PROGRAMME IMPLEMENTATION

Since its statement to the ITTO certification working group in May 1994 (ITTO 1994), the Ministry of Forestry has maintained its position that implementation of the Indonesian certification programme will begin in 2000, in line with the ITTO target. LEI is working towards this target and in 1997 and 1998 carried out a number of field tests on the programme, focussing on the development of manuals and training programmes for field assessors, a communication programme to make LEI better known, and the development of chain-of-custody procedures.²⁶

LEI was established as a foundation in February 1998, with a board of 5 directors (all of

whom had been involved in the LEI working group) to run the organisation. Dr Mubariq Ahmad who had recently completed a PhD dissertation in the USA on certification was recruited to be Executive Director. Dr Salim chaired the board (E. Salim, personal communication, March 1998). In the first months of 1998, LEI focussed on training of assessors and finalising certification procedures.

In March 1997, six concessionaires were selected by the Minister of Forestry from 25 applicants, to participate in the final field tests of the LEI programme. These seven companies were ITCI, Sumalindo, Dwima, Sari Bumi Kusuma, Kiani Lestari and Inhutani II. The companies were selected on the basis of their “exemplary” forest management to date. They were expected to pay for the costs of the assessments but in exchange the Minister offered several deregulation incentives to concessionaires that obtained certification, notably the right to set their own annual allowable cut for three years (*Bisnis Indonesia*, March 1997).

The idea of offering a deregulatory incentive to certified concessionaires had been promoted by a policy broker – the Natural Resources Management Project (NRMP). According to Bennett *et al.* (1997: 66):

The estimated cost of certification, say US\$30,000 to 100,000 was considered [by concessionaires] a relatively small cost to pay to be relieved of specific obligations to the Ministry of Forestry’s inspection service...the excessive costs of bureaucratic involvement in regulation in the forest industry are difficult to quantify because they include many unrecorded transactions. Costs range from direct disbursements to delays and other inefficiencies. Two of many examples are (a) the approval process for the annual allowable cut (AAC/RKT) can take up to a year, creating uncertainty and

²⁶ Despite the political and economic instability in Indonesia this timetable was maintained and LEI was proceeding with its first certification audits, in collaboration with FSC, by the end of 2000.

encouraging poor planning. Thus, roads in a RKT area are used too soon after construction because the road building permit is delayed. As a result, road quality deteriorates rapidly raising both costs and erosion. (b) delayed arrival of the Ministry inspector who authorizes the production report by say, one day, can hold up for a month or more the river transport of several hundred cubic metres of logs because the river level has fallen too low.

The idea of linking certification to deregulatory rather than market incentives is innovative and is not used in other certification systems. NRMP developed the idea after research on Indonesia's export markets and on international trends in the tropical timber trade, and was then able to convince both the Ministry of Forestry and the LEI working group of its validity. The role played by NRMP is consistent with the ACF definition of "policy brokers" – actors in the domain whose dominant concerns are to reach a reasonable solution to the problem and keep the level of political conflict within reasonable levels.

The potential costs of certification have not yet been clearly defined, although the Ministry of Forestry and private sector representatives interviewed in the course of the case study seemed confident that they could be absorbed. Preliminary estimates by the NRMP, based on work by Jaakko Poyry, The World Bank and Société Générale de Surveillance (SGS), suggest that the cost of bringing forest management up to the performance level required for certification will vary between zero and US\$13/m³. Auditing costs are estimated at between US\$0.20 and US\$0.40/m³, and chain-of-custody costs from US\$0.30 to US\$1.30/m³. Total costs of certification (including product labelling) are thus estimated to be between US\$0.50 and US\$14.70/m³ (Bennett *et al.* 1997).

These costs should be seen in light of the large profits that concessionaires are alleged to be making. One calculation by the environmental group WALHI, using Ministry of Forestry data, concluded that after deducting logging costs, taxes, royalties and normal return to capital, concessionaires were retaining US\$78/m³ from

an average log value of US\$145/m³ (WALHI 1991). It should be noted that some foreign observers (e.g., Gillis 1988) have pointed out that concessionaires' profits are reduced by numerous payoffs they have to make to government officials. These officials have low salaries and see these payoffs as a routine part of their remuneration.

The LEI working group recognises the existence of several challenges to the implementation of an effective certification system. In view of the fact that a low percentage of forest concessions are being managed according to existing regulations (according to the Ministry of Forestry's own figures), costs of achieving the level of performance needed for certification may be prohibitive. Another issue is that several factors relating to sustainable forest management (e.g., royalty system, length of concessions) are dependent on government forest policy, rather than on the concessionaire. Finally, it is going to be difficult to establish a certification system that will be credible internationally in the rent-seeking environment which characterises Indonesian forestry today. The LEI working group proposes to address the first problem by having five levels of performance recognised in the certification scheme (like the Proper Prokasih programme). Even concessions, which are some way from achieving performance levels required for certification, can track their progress as they move from the lowest grade to an intermediate level.

Concerning forest policy issues, the working group proposes to identify regulations that are in contradiction with the achievement of sustainable forest management as certification proceeds and point these out to the Ministry of Forestry. As for the credibility of LEI, the intention is to seek compatibility with both FSC and ISO. In addition, three options for the legal form to be taken by LEI are being explored: establishment by Presidential Decree, as a foundation or as an association.

On this matter two issues must be considered simultaneously: credibility and whether certification is voluntary or obligatory. In addition, domestic credibility may be in partial contradiction to international credibility. For

example, if it is decided that certification is to be compulsory, establishment of LEI by a Presidential Decree would give the institute a relatively high level of credibility with most stakeholders domestically. However, internationally LEI might be less credible and there is concern that if certification is made obligatory LEI might gradually find itself taking over the role of the Ministry of Forestry in monitoring concessions, which would be a heavy burden. If, on the other hand, certification is voluntary an association would provide the transparency that would be a basis for international credibility. At the end of 1997 it was decided to establish LEI as a foundation and to make certification voluntary (E. Salim, personal communication, March 1998). By this time the loss of credibility of the President (who resigned in May 1998) precluded the option of establishing LEI by Presidential Decree.

In order to assess how the programme implementation phase might evolve (and how some of the conflicts mentioned in the section above on programme development, may emerge), it is useful to first summarise the views of the different interest groups on certification, as they were expressed in the interviews in mid-1996 and mid-1997.

Ministry of Forestry officials interviewed saw LEI certification as a tool to improve forest management. They claimed that the main benefit of certification would be to improve control over concessionaires. It was noted that certification was primarily aimed at natural forests. Representatives from the Ministry said that they intended to use the results from certification audits to complement the information from their field guards, which is considered inadequate. One official even said that forest guards “could not be trusted”, because their low salaries made them susceptible to corruption. This official said that if a certification report reveals illegal activities by the concessionaire, the Ministry will use this information as a basis for fines or suspension of the concession. The domestic benefits in terms of improved forest management are considered more important than potential international market benefits and the official position is that certification is a domestic

tool to achieve Indonesia’s commitment to sustainable forest management, made under the auspices of the ITTO Target 2000.

Although the Ministry does not seem to expect major market benefits from certification, in terms of increased price or market access (probably because Indonesia exports plywood mainly to “non-ecosensitive” markets in Asia), it is hoped that certification will improve Indonesia’s international image and serve as a defence against trade measures against tropical timber, such as the Austrian law of 1992. Although officials were careful about criticising LEI, there were several suggestions made in 1996, that some of the proposed LEI criteria on social issues might not be “feasible”, and might place unfair burdens on concessionaires. Interestingly, these concerns seem to have dissipated by 1997, without LEI making any significant changes to the criteria. This can perhaps be seen as an example of policy learning by Ministry officials. The Ministry appears to expect certification to be obligatory in the medium term, a few years after 2000. One senior official stated in 1997 that if LEI were successful, the Ministry would reduce its monitoring activities over concessionaires. There was a variety of views on the desirability of allowing foreign certifiers to operate in Indonesia, but this issue seemed to be marginal for the Ministry in 1996 and 1997. The key issue of 1996 was the LEI criteria, and in 1997 the LEI institutional arrangements.

The Ministry of Forestry claims that it wants to achieve improved control over concessionaires (which is part of its official mandate). This motivation should be counterbalanced with the potential danger for the Ministry of certification revealing paybacks and other forms of “informal” financing for Ministry officials. It is also interesting to ask why the Ministry would want to improve control over concessionaires. Clearly the Ministry has to say that it wants to do this, since it has already publicly admitted that control is insufficient. But do the benefits, that might accrue to the Ministry from encouraging better management of the country’s forest resources for which it has the responsibility, outweigh the risk of alienating the politically and

economically powerful private sector? This is unclear. What can be said is that, at least in the short term, it suits the Ministry to publicly support the idea of certification. This may be quite different from supporting the implementation of an independent certification scheme, however. Perhaps this is why Ministry officials interviewed expected certification to become obligatory in the future (i.e., a regulatory instrument under their control). This would allow them to have control over how certification is implemented.

The official views of the private sector are similar to those of the Ministry. One private sector representative went as far as to say that “we have the same opinion on ecolabelling as the Ministry of Forestry”. The Indonesian Wood Panel Association (APKINDO 1996: 15) summarised its views on the advantages of certification as follows:

First, the regulations behind Eco-labelling promote sustainable forestry management by providing better monitoring and management systems. Second, Eco-labelling provides Indonesia with a competitive advantage in the world market. And third, the implementation of an Eco-labelling system is a clear signal to the world that Indonesia is at the forefront of developing innovative solutions for global forestry problems.

Not surprisingly, concessionaires’ representatives who were interviewed were not enthusiastic about the additional control over their activities that certification implied, but they said that they considered it to be inevitable, given international concerns about forest management in Indonesia. They seemed optimistic that many concessions would be able to benefit from certification soon, although internal audits using the APhi criteria had indicated that no concessions were yet “fully ready” for certification. The main benefits associated with certification for the private sector were addressing concerns of customers in Europe and the USA over forest management. A secondary benefit was that it could provide a tool to allow concession holders in Jakarta to have more reliable

information on what is actually occurring in their concessions.

Cost of certification was not mentioned as a problem in 1996 but the “feasibility” of social criteria were, although as with the Ministry, this had dissipated by 1997. Some concerns were expressed that LEI was too close to NGOs and overly influenced by them in this area. The private sector, consistent with its view of certification principally as a marketing tool, gave little importance to changes in forest policy or other forest policy tools, to accompany certification. For example, Soemitro (1996: 8), writing on behalf of APhi, simply notes “In many cases, problem of sustainable forest management can be made easier if permanent land use of forest and resource security can be assured.”

The private sector took the initiative to support certification because it hoped for market benefits, or at least minimisation of market losses. The analysis of MPI and APhi seems to have been that with growing international pressures, and the development of certification elsewhere a probability, it was better for them to take a proactive stance rather than to wait and react to events. The private sector was able to begin developing certification fairly easily because it is well organised and has substantial technical, human and financial resources at its disposal. Whether the private sector expects to have to make any significant changes in operating practices in concessions to obtain certification is not clear.

Representatives from the Dwima group, which manages four concessions in Kalimantan, who were interviewed for this thesis said that the board of directors had taken a decision in 1994 to seek certification. At that time a working group was set up to prepare internally for certification. In 1996 the board created a new post of board advisor on certification and environment management to oversee all work on certification. When officials from the company were interviewed in July 1997, the discussions on certification had been focussed on staff in Jakarta. Information material and briefing sessions for staff in Kalimantan were being prepared for use in August 1997.

This shows that the decision on certification was initially taken at the highest level

of the group and was gradually transmitted to the operating staff. The reasons given for Dwima's interest in certification were the same as those listed above for the private sector in general. However, particular emphasis was placed on market benefits because Dwima has specialised in producing high-grade plywood and exports a more to ecosensitive markets than the industry average (30% to the USA and 20% to Europe).

NGO respondents felt that forest certification provided an opportunity for them to contribute to the forest policy debate, and they intended to use this chance to try to legitimise community forest management and to stress the importance of social issues in discussions on criteria and indicators for commercial forest management. Concerning the implementation of certification in concessions, some NGOs felt that this was difficult but feasible, with some of the most forward-looking concessionaires. Others felt that no concessions could possibly qualify for certification because of their poor performance and the policy environment, which did not provide incentives for sustainable management. This would lead to a situation where either LEI would come under serious pressure to weaken the criteria (leading to a situation where the status quo would be legitimised) or all concessions would fail. Neither result would be productive.

NGOs seem to have responded to opportunities presented by this discussion of certification to get their concerns recognised in the public policy process, by a division of labour among members. Actual implementation of certification, on the other hand, is problematic. Some members of the umbrella organisation WALHI (e.g., the Indonesian Institute for Forest and Environment (RMI) and The Indonesian Tropical Institute (LATIN)) participated in the LEI working group, while WALHI limited itself to rather cautious statements on certification (e.g., Hafid 1996).

NGOs considered that certification should be a voluntary market instrument and that LEI should have the status of an NGO. Some concern was expressed about suggestions that LEI might be established by Presidential Decree (giving it the status of an official body), which would compromise its integrity. The concern was also raised that if certification was made obligatory,

this might lead to a reduction in monitoring of concessions by the Ministry of Forestry resulting in a "zero sum game". NGOs are basically supporting certification because they hope that it will allow them to introduce social and environmental issues into the policy agenda, particularly obtaining support for community forestry. NGOs do not expect certification alone to lead to significant improvements in forest management in concessions, but it can highlight problems and provide support for policy changes. One NGO respondent even stated that he wanted to delay certification in concessions to allow for the development of certification standards for community forestry, so that this is not "left behind" in the certification process.

The academics interviewed tended to be cautious about whether certification could help improve the situation, unless it was accompanied by fundamental policy changes. One respondent stated that both the Ministry and concessionaires were underestimating the changes they would need to make to be certified. Another said: "Sustainable forest management is hopeless if corruption, illegal cutting and weak law enforcement continue". The main benefits seen from certification were increased transparency in the forest sector and as an awareness tool to show concessionaires and the Ministry how far they were from sustainability, which could lead to "policy learning".

NGOs, academics, international organisations and certifiers tend to stress the need for fundamental reform of forest policy. Adiwoso (1996: 36), an economics lecturer and member of the LEI working group, wrote:

The main idea at present is to give priority to finalize the criteria and indicators of assessing SFM at the management unit. However it is realized that these criteria and indicators cannot be detached from possible inconsistencies of the government regulations. Therefore, the working group is also defining possible alternatives on the mechanism to inform and indicate, as well as advise reforms of government regulations.

Three approaches towards certification were found in interviews with officials from international organisations. Some respondents felt that certification was a rather marginal issue at present and that the priority should be given to fundamental policy reforms in the forest sector in areas such as tenure and revenue capture. Once major policy failures in these areas had been addressed, it would then be possible to consider the use of market incentives like certification. Other respondents felt that certification was actually a distraction and was leading NGOs, academics and others to concentrate on the discussion of standards for natural forest management when the key issue was the large-scale conversion of natural forests to intensively managed plantations. One respondent said “certification is just a time saver for the government to cover the transition from natural forest management to plantations”. In future it would probably be possible to certify some small areas of natural forests but, since most of the industry would be based on plantations, this would be irrelevant.

A third group of respondents was optimistic about certification. They argued that the ongoing discussions of criteria for certification were useful in themselves, especially as they allowed NGOs to bring social issues to the table. In addition, certification could introduce more transparency into the forest sector, even if few concessions would qualify for certification in the first instance.

Certifiers (i.e., representatives from LEI and SGS) were optimistic about the potential benefits of certification both in promoting multi-interest group discussions on criteria for sustainable forest management and encouraging monitoring of forest management. Respondents recognised the difficulties of improving forest management in Indonesia to a level where it could be certified, and accepted the need for additional policy initiatives to complement certification. They argued that forest management in Indonesia is not uniformly bad and that some concessions are relatively well managed. They noted that if certification can identify and reward these concessionaires, and promote community forest management, it could be useful.

It can be seen from the above account that certification is supported by different actors for different reasons. The Ministry of Forestry hopes

that it will provide additional monitoring of forest management on the ground (although increased transparency in concessions may also reveal payoffs to government officials, which the Ministry would not be keen to reveal). NGOs also want improved monitoring of concessions, and in addition hope that certification can promote and legitimise community forest management. Representatives of international organisations tend to support the NGO view although they are more cautious about the benefits certification might bring. Academics, especially foresters, are also less optimistic about certification bringing real benefits in terms of performance on the ground and see it mainly as a way to increase transparency about forestry practices in concessions.

On the other hand, concessionaires hope that certification will improve their international credibility and perhaps give some suggestions for improvements in management. However they do not expect to have to make major changes in their practices to obtain certification.

Actors may be actually supporting the concept of certification more than its implementation because once certification reaches the implementation phase, not only will differences between the coalitions emerge, but each coalition will be faced with some problems. For example, the private sector may find it very divisive, and problematical in terms of marketing, to have some of its members certified and not others. The Ministry of Forestry will have to make difficult choices between an independent certification programme, which is internationally credible but which reveals information the Ministry wants to conceal, and a government-run scheme that does not really change anything. Finally if certification of concessions proceeds before there is any progress on community forest management, NGOs will not achieve their objectives.

In the introduction to this thesis it was noted that two principal objectives for certification have been identified: to improve forest management and to ensure market access. In Indonesia, the Ministry of Forestry, NGOs and international organisations are focussing mostly on the first objective, whereas the concessionaires are

focussing on the second. At first sight this is surprising because the Ministry of Forestry appears to have different objectives from its advocacy coalition partner, the private sector. However, this situation is consistent with the ACF, which predicts in hypothesis 2 that actors in a coalition will show consensus on core policy issues but less so on secondary aspects (such as certification).

In view of these differences in perspective on the objectives for certification, the implementation of the programme is likely to pose some difficult challenges. It is unclear how far LEI can go in terms of proposing issues for discussion (and even changes) in national forest policy, to complement certification. At some point in this discussion the Ministry of Forestry is likely to see a threat to its own authority. It will then have to decide whether it lets LEI put forward proposals for changes in forest tenure and revenue systems. Alternatively, the Ministry could create another working group (which it controls) to take the lead on these issues. Or, finally, the Ministry could delay any work in this area for the present.

In general, relations between the LEI working group and the Ministry tend to be uneasy. The working group is concerned that the Ministry may try to get LEI to certify current forestry practices as acceptable. The Ministry is concerned that LEI may set certification standards too high and may try to take control over broader issues of forest policy. In taking power away from APHI by denying it the right to certify concessions, and giving this power to LEI the Ministry has taken a risk, with still uncertain results.

Another area, which may be divisive among actors, is whether certification is voluntary or obligatory. APHI tends to want it to be obligatory, probably for two reasons. One is to avoid divisions between members of APHI if some decide to pursue certification and others not. Secondly, if certification becomes obligatory, it is likely to be carried out under the control of the Ministry of Forestry and APHI has a track record of “getting its way” with the Ministry. Voluntary certification carried out under an independent body might be more difficult for APHI to influence.

The Ministry of Forestry expects certification to become obligatory in the medium term, although respondents were divided on whether it should start on a voluntary basis. The Ministry has recognised that control of concessionaires’ performances is inadequate, and needs to be improved. It has three options to achieve this: strengthening its own monitoring procedures; sub-contracting monitoring to consulting firms; or certification. The first has not proved to be satisfactory. The second would be costly. The third (which implies a voluntary approach) is the cheapest for the Ministry but the one over which it has the least control. The Ministry is thus faced with a trade-off between cost and control. A complicating factor, as mentioned above, is that independent certification may reveal systems of payoffs to government officials, which the Ministry does not want to have divulged.

Some of those interviewed in the course of the case study speculated that the Ministry is now beginning to face the dilemma mentioned by Ascher (1993), i.e., whether to maximise short-term revenues by keeping logging rates high at the risk of losing political power in the longer term because of forest depletion, or to reduce logging rates now but run the risk of opposition from the industry. Some respondents suggested that the second approach is gaining support in the Ministry and that the emergence of certification is supported by this “school” as a way to introduce better control over logging operations and as a prelude to reducing logging rates. Proponents of the second approach might see NGOs and international organisations as allies against the industry lobby. There is no reliable evidence as yet however that the Ministry of Forestry has recognised that logging rates are too high, let alone that there are different schools in the Ministry on how to address this problem. For example, in 1993, the Minister told the parliament that harvesting of natural forests was not keeping up with its target of 31.4 million m³ per year and that harvesting levels could be raised still further in future (Suharyanto 1993).

It is of course an open question whether any of the actors’ expectations concerning certification will be realised. Certification currently focuses on natural forests, whereas

plantations will become increasingly important in future. Some critics have suggested that the whole certification debate is a diversion from what should be the real issue – the conversion of natural forests to plantations.

Whether or not certification satisfies the expectations of the different actors, or is even implemented at all, the policy process on certification has been marked by the increased influence of the Environmental Coalition in the forest policy domain. It should be noted however, that the influence and resources of domestic NGOs is very limited, and the influence of the Environmental Coalition depends in large part on the World Bank and international NGOs. It is uncertain whether domestic NGOs will be able to affect other issues apart from certification. They may even simply be a symbolic presence to reduce international criticism of Indonesia. However, for the moment, they are significant actors in the domain, and this marks a significant change from the situation in 1990 when NGOs were largely excluded from the Indonesia Tropical Forestry Action Plan process.

4.7 DISCUSSION AND CONCLUSIONS

4.7.1 Strengths and Weaknesses of the Indonesian Forest Certification Programme and Recommendations for Improvement

In this section first the LEI programme is discussed and then a number of other policy initiatives, which could complement certification, are mentioned.

The LEI programme takes a performance-based approach to certification and is thus closer to the FSC than to ISO. There was collaboration between LEI and FSC at various stages in programme development, notably the 1994 conference co-sponsored with CIFOR. In mid-1998 discussions were under way between LEI and FSC aimed at mutual recognition between the two systems. The basic elements of the LEI system are similar to those of international certifiers accredited under the FSC, such as Scientific

Certification Systems (SCS 1995) or SGS (Upton and Bass 1995: 84).

Despite the linkages between LEI and FSC, the reality is that the LEI programme developed largely autonomously. In consequence, there are a number of differences to FSC. First, the LEI programme places more emphasis on public consultation, to the degree that it may be difficult for LEI to fully control the certification decision because of the requirements for public consultation. Second, the criteria and indicators of LEI are more general than those of SCS and SGS and leave more flexibility to the expert opinion of the field assessors. Finally, and related to the second difference, none of the other certifiers use the Analytic Hierarchy Process (AHP) for decision making. The strength of AHP is allowing the criteria and indicators to be adapted to local conditions in a transparent and reliable manner. The weakness is that it can appear like a “black box” decision-making procedure to those not familiar with it, and this may become an issue with local stakeholders.

Public participation in decision-making in the Indonesian forest policy domain is such a new concept that there are no established procedures which LEI could draw on. Under these circumstances, the iterative series of tests, which LEI has been carrying out and which will continue through 1999, will provide the best way of testing the public participation process. In the procedures established so far, LEI has preferred to maximise public input to the probable detriment of effective decision-making. It is likely that this will need to be corrected and that Panel 3 should basically serve as a communication forum, unless some major issues, which have been previously neglected in the process, emerge.

The second issue is clearer. The LEI criteria and indicators are worded rather generally and sometimes read more like intergovernmental criteria and indicators (or like the Canadian certification standards discussed in Chapter 5), than performance standards. For example, Criterion 1.2.1 is: *proportion of protected area clearly demarcated in the field*.

Normally one would expect a performance standard to read: *x% of forest protected in the field*. The intention behind leaving flexibility in the

standard is that the assessment team can make a professional judgement, taking into account performance in other areas as well, about whether a concessionaire's performance is adequate on an issue. The AHP is used as a tool to assist in such decision-making. The major weakness of the approach however is that too much responsibility is given to the assessors. This is particularly worrying when LEI itself acknowledges the lack of trained assessors in Indonesia. In addition, NGOs in Indonesia and international consumers are unlikely to be convinced by a performance-based system which lacks actual performance levels in most instances. This is an area where the standards will need to be strengthened and more specific performance levels should be incorporated during the tests in 1998 and 1999, before the system is fully operational in 2000. If performance levels are incorporated in the standards, then concerns about the "black box" aspect of the AHP will also diminish. Another advantage of specifying performance levels is that international recognition of the Indonesian system by FSC will also be facilitated. Finally, Indonesian companies that wish to seek certification under ISO 14001 and LEI will also find this easier if the LEI standards include specific performance levels.

Overall, using the criteria for assessing certification programmes presented in Chapter 1, a preliminary evaluation of the LEI programme can be made as shown in Table 4.6.

At present, there are several policy initiatives that could complement certification. The first is the crackdown on violations by concessionaires, which began in 1989 and has been accompanied by fines and suspension and revocation of concessions (Barber *et al.* 1994: 22). This has had both direct and indirect impacts on concessionaires. One example of an indirect impact is the recommendation made to investors by Kleinwort Benson Research (1996) to sell Barito Pacific shares for various reasons, including the fact that the company had recently been fined by the Ministry of Forestry and had logging licences revoked for 45 000 ha (Kleinwort Benson 1996).

The second is a proposal for the modification of the forest tenure system leading to the creation of KPHPs (Production Forest Utilization Units) to replace existing concessions.

The idea is to move away from a system where a concessionaire has a licence to log a certain area for 20 years to one where a forest manager manages a smaller area on a long-term basis. This concept had been developed through a joint project between the Ministry of Forestry and the Overseas Development Administration of the UK. The objectives are:

to provide for rational production forest organization into manageable units for the sustainable and profitable forest utilization to ensure the continuous supply of forest products and other uses for the national, regional and local communities development. The purpose of the KPHP management is to sustainably produce forest products while giving full attention to the biodiversity and the ability of the forest to protect the environment (Fraser *et al.* 1995: 2).

KPHPs will be approximately 100 000 ha, which is smaller than most current concessions. The intention is to establish them as the 20-year HPH licences come to an end, retaining only productive forest areas and leaving out areas that have been deforested or which are used by local communities for agriculture. Boundaries are to be established through negotiations with local communities. Once the boundaries are established annual allowable cut will be based on the long-term growth increment of the KPHP, rather than simply felling all merchantable trees over 50 cm diameter as is done under the current system.

The combination of resolving conflicts with local communities, giving forest managers longer-term-security over smaller areas, basing harvesting on increment and including the conservation of biodiversity as an objective, is intended to address a number of the forest tenure problems identified in Section 4.2 of the case study. Also, it is anticipated that the introduction of KPHPs will allow a reduction of logging rates. The establishment of KPHPs on a pilot basis was authorised by a decree from the Minister of Forestry in 1991 (Decree no. 200/kpts-II/1991) and the first two experimental pilot KPHPs were established in 1993.

Table 4.6 Evaluation of the LEI Forest Certification Programme

Criterion	Comments on LEI System
Credible to consumers	It is unlikely that the LEI programme will be credible to environmentally concerned international consumers until clear performance levels are included. In view of the lack of credibility of the Indonesian government, the non-governmental nature of LEI should be emphasised and strengthened (e.g., LEI should not be funded by monies from the reforestation fund, which was one financing option mentioned originally). If these issues are resolved, consumer recognition and credibility could be improved through a product label.
Comprehensive to include all types of timber and timber products	LEI currently covers only natural forests. Certification of plantations will be increasingly important but will also be controversial as the issue of conversion of natural forests to plantations must be addressed. A system for certification of community forests and non-timber forest products should also be developed.
Objective and measurable criteria	The current criteria are relatively objective but are difficult to measure. Performance levels are needed.
Reliable in assessment results	It is too early to assess this, but in the absence of performance levels assessment results may not be seen as reliable.
Independence from parties with vested interests	The separation of assessment from the issuing of certificates is a good measure to favour independence.
Voluntary in participation	The intention of LEI is for the programme to be voluntary but the Ministry of Forestry may still want to make it obligatory. This should be resisted as it is likely to lead to Ministry control of the programme.
Equal treatment, non-discriminatory in trade impact	International aspects are not relevant for the present as the programme only applies to Indonesia. Since the programme will probably operate largely independently of government, it should not be subject to criticism as a trade-distorting government subsidy.
Acceptable to the involved parties	This is the case so far and is one of the successes of LEI
Institutionally adapted to local conditions	Yes. The separation of assessment from issuing certificates is a clear example of this, as is the acceptance of the programme by all relevant actors in Indonesia.
Cost-effective	It is too early to confirm this but the initial indications are positive, particularly if certification is accompanied by a reduction in the reporting requirements to the Ministry of Forestry.
Transparent to allow external judgement	Currently, in the absence of performance standards transparency is not guaranteed, although the provisions for public consultation (and thus information) go beyond anything in the Indonesian forest policy domain today.

Table 4.6 Continued

Criterion	Comments on LEI System
Goal orientated and effective in reaching objectives	The logical framework approach of the standard is designed to achieve this.
Practical and operational	The lengthy and complex public consultation process may need simplification.
Applicable to all scales of operation	So far only applicable to forest concessions in natural forests. Standards need to be developed for plantations.

The third initiative includes various efforts to improve the quality of information available about Indonesia's forests. In 1996, a new national forest inventory was published (GOI/FAO 1996). In 1993, a five-year project was initiated with APHI funding to conduct aerial mapping of Indonesia's production forests at a scale of 1: 20 000.

Finally, there are some indications that government policies on community forestry and recognising traditional land rights of local communities (*adat*) may change with the 1992 Law on Population Development and Family Welfare, which recognises the right of "vulnerable peoples"... "to utilize a customary territorial heritage". This approach is quite different to that outlined in the Basic Forestry Law of 1967. The Minister of Forestry has made statements in support of the recognition of traditional rights (Barber *et al.* 1994: 23). Also, in 1994 the Minister visited the Damar (*Shorea javanica*) community agroforestry systems in southern Sumatra and reportedly declared the area to be the best model forest in Indonesia (Soemitro 1994: 18).

Even if all of these initiatives were successful it is not clear that they would be sufficient to provide the necessary conditions for sustainable management of Indonesia's forests. Changes in the forest revenue system and plantations policy, as well as the transmigration programme, would also be needed. On the other hand a package of these initiatives, including certification, would mark a significant step forward on the road to sustainability. The recent package of policy reforms imposed by the World Bank and the IMF include a number of measures that could be helpful in this respect. However, it was unclear when this thesis was being completed

in mid-1998 to what extent these measures would be implemented, and what effects the economic crisis was having on the forest industry. It was reported that the instability of the banking sector was making it difficult to obtain routine loans for working capital and that the private sector groups holding logging concessions were facing financial difficulties in all their operations. Under these circumstances the implementation of certification in Indonesia seemed very uncertain in 1998²⁷.

4.7.2 Applying the Advocacy Coalition Framework in the Indonesian Forest Policy Domain

In the sections above, the Indonesian forest policy domain and the events within it relating to the development of a forest certification programme have been presented within the Advocacy Coalition Framework. Policy change was characterised by two elements. First, the support of the Ministry of Forestry, the private sector and NGOs for the LEI programme of forest certification can be seen as representing a change in a secondary aspect of their belief systems. Second, these actors' support for certification, which is a market and/or deregulatory instrument, signals the potential for a future modification in their near policy cores.

This policy change can be traced to modifications of a Relatively Stable Parameter (in this case the distribution of forest resources was

²⁷ At the end of 2000, the status of fundamental reforms of the forest sector, required as conditions associated with support from the IMF, was still uncertain. However progress was still being made on the implementation of the LEI certification programme.

affected by deforestation and forest degradation), and to several related Dynamic System Events – changes in international public opinion, increased environmental concerns in some of Indonesia's plywood export markets and the appointment of a new Minister of Forestry. Within the policy domain, policy learning occurred as a result of various publications and reports. The Natural Resources Management Project (NRMP) and Dr Emil Salim played the roles of Policy Brokers.

In this concluding section, the empirical information from the Indonesian case study is used as the basis for a critical examination of the ACF, through the testing of selected hypotheses. This is not a complete testing of the framework. Based on the information available, the discussion below focuses on hypotheses concerning advocacy coalitions and policy change. Some of the hypotheses concerning coalition learning are also discussed.

4.7.2.1 Advocacy Coalitions

One of the basic hypotheses of the ACF is:

Hypothesis 1: On major controversies within a policy subsystem when core beliefs are in dispute, the line-up of allies and opponents tends to be rather stable over periods of a decade or so.

This hypothesis contains the main elements of the framework: the focus on the policy subsystem (here called policy domain) as the unit for analysing policy change; the view that shared belief systems link coalition actors together; and the suggestion that core beliefs are resistant to change (Mawhinney 1993: 70).

The Indonesian case provides support for this hypothesis. The major controversy in the policy domain is about the rate and manner in which forest resources are being exploited (or converted), and who is benefiting from this. In this controversy, we can find on one side the Forestry Coalition, whose belief system appears to stress the primacy of forest exploitation over forest protection. On the other side, the Environmental Coalition has argued for a reduction in logging rates based on a belief system

that stresses a more balanced approach between forest exploitation and protection. It has been suggested by Ascher (1993) that there is another coalition led by the Ministry of Finance which would tend to side with the NGO coalition on this issue on the basis of economic efficiency. Recent developments in the domain, under pressure from the IMF and the World Bank, may lead to the transfer of the State-owned forestry companies and the reforestation fund to the Ministry of Finance, which would be consistent with Ascher's view of this Ministry as being an actor in the forest policy domain.

The position of the Forestry Coalition on this controversy has been stable for over a decade. On the other hand the line-up of the Environmental Coalition has evolved, with the change in position taken by the World Bank between 1990 and 1994, for example. The position of the Ministry of Finance Coalition is closer to the Environmental Coalition; it favours a reduction in logging rates, but for the sake of economic efficiency.

What we can see is a policy domain dominated by one major coalition, which has been stable over several decades, with a minority coalition gradually coming together and gaining members over the 1980s. The opposite of having stable coalitions would be a situation where:

Actors are primarily motivated by their short-term self-interest and that "coalitions of convenience" of highly varying composition will dominate policy-making over time (Sabatier 1993: 27).

This view is explicitly rejected in the ACF and appears fully justified in the Indonesian case, even if the membership of the Environmental Coalition has not been completely stable over the last decade.

The second hypotheses on coalitions is:

Hypothesis 2: Actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core, but less so on secondary aspects.

This hypothesis is based on the assumption that belief systems are hierarchical, in other words, that abstract beliefs are more resistant to change than more specific ones (Sabatier 1993: 32). Again, the Indonesian case provides support for this hypothesis. The two actors in the dominant coalition have very similar policy core beliefs but some differences on secondary aspects can be detected. For example, in 1993 the Ministry of Forestry differed from the Indonesian Forestry Community (MPI) on whether APHI should implement forest certification in Indonesia. In the NGO-led coalition, there is a surprising level of agreement on both policy core and secondary aspects between the NGO WALHI and the World Bank, for example. However at the level of the deep normative core it has hard to imagine that an organisation devoted to promoting economic development like the World Bank would have similar values as an NGO focussing on social justice and environmental protection.

This raises the possibility that under certain circumstances coalitions may constitute actors who agree on what needs to be done (e.g., reduce logging rates in Indonesia) but have different reasons for doing so. The World Bank takes this view partly because of concerns about the long-term impacts of forest depletion on the Indonesian economy, and we can see evidence here of policy-oriented learning by the bank as it previously took a different view on this matter. WALHI is more concerned with short-term impacts on local communities and the environment. It could be argued from the Indonesian case that the circumstances required to create such coalitions are significant changes in external factors (in this case the basic distribution of natural resources and public opinion) combined with the presence of a stable dominant coalition. This would give other actors the incentive to unite their forces, even if their core beliefs differed. This raises the question of how coalitions are formed, which is discussed below after examination of the next hypothesis.

The third hypotheses on coalitions is:

Hypothesis 3: An actor (or coalition) will give up secondary aspects of a belief system before acknowledging weaknesses in the policy core.

The decision of the private sector, the Ministry of Forestry and NGOs to support certification amounts to a change in a secondary aspect of their belief systems. However if the programme is successfully implemented, it will have implications for policy core beliefs, such as the proper scope of governmental vs. market activities and basic choices concerning policy instruments (Sabatier 1993: 31). Despite this, as of 1997, at least three actors had made changes in a secondary aspect of their belief system without yet changing the policy core.

It can be seen from the discussion above that the Indonesian case provides partial support for the three ACF hypotheses concerning advocacy coalitions. However the case also suggests several weaknesses of the ACF in this area.

Firstly, the ACF definition of coalition is not very precise. On one hand, the members of the US air pollution control subsystem are listed by Sabatier as institutions, ranging from the US Environmental Protection Agency to polluting corporations and NGOs. On the other hand, on the same page, a definition of “advocacy coalition” refers to individuals:

People from a variety of positions (elected and agency officials, interest group leaders, researchers, etc) who share a particular belief system – that is a basic set of values, causal assumptions and problem perceptions – and who show a non-trivial degree of coordinated activity over time”. (Sabatier 1993: 25)

Although individual actors may be important in some cases (in Indonesia Dr Emil Salim is an example), it is more consistent with the case-study applications of the ACF (Sabatier and Jenkins-Smith 1993), the Indonesian case and with policy network theory,²⁸ to focus on organisations as actors rather than individuals. We could therefore see policy domains as being composed of individuals, most of whom represent organisations.

²⁸ For example, Laumann and Knoke (1987: 11) specify that the members of a policy domain are formal organisations rather than natural persons acting in their own right.

Second, the ACF model has relatively little to say on the way in which coalitions are formed and on their internal structure and processes. From the perspective of the Indonesian case this is a weakness because the two coalitions are completely different in history and membership and it would be useful to have some hypotheses on how these differences might affect the policy process. One coalition is made up of only two actors and has been stable for decades. The other is much looser, and is made up of a variety of disparate actors who have come together more recently. In the Indonesian case, we might expect the Environmental Coalition to be less stable and for its members to disagree from time to time, because of its recent creation and disparate membership. Sabatier (1993: 26) has suggested that there will be greater fragmentation of beliefs in recently formed policy subsystems than in more established ones. Based on the Indonesian example, it can be suggested that the same may apply to advocacy coalitions.

It might be that the very strength and long existence of the dominant coalition favours the formation of other, more diverse coalitions whose actors have to unite if they are to have any policy influence. Support for this concept can be found in one of the previous applications of the ACF model to environmental conflicts in the USA. This study suggests that coalitions take years, even decades, to develop and the existence of sustained policy conflict may be a pre-condition for coalition creation (Sabatier and Jenkins-Smith 1993). In a case study of educational policy in Ontario, Canada Mawhinney (1993), suggested that members of minority coalitions have an incentive to collaborate to increase their chances of gaining power, while actors in a long-dominant coalition may eventually begin to develop divergences.

These views on coalition formation and dynamics are consistent with those presented by Laumann and Knocke (1987), who have suggested that stable coalitions of polarised opponents arise only in policy domains where specific controversial issues come up regularly. They argue that issues have two key properties that determine how they are formulated and debated. The first is

whether the issue is unprecedented (episodic) or arises regularly (recurrent). In the case of recurrent issues, there is likely to be a set of precedents, rules and documentation which will influence the debate. The second is whether the issue can be resolved without any clear detrimental effects for actors in the domain (facilitative) or whether there will be winners and losers depending on what decision is finally reached (oppositional). Laumann and Knocke have suggested that the following forms of organisation of the policy domain will arise depending on the combinations of the two properties of issues.

Table 4.7 Cross-tabulation of Types of Issues Showing Policy Domain Structures

	Episodic	Recurrent
Facilitative	Fluid coalition with no opposition	Iron triangle
Oppositional	Fluid coalition of strange bedfellows	Stable coalition of polarized opponents (e.g., labour policy)

Source: Laumann and Knocke (1987: 313)

This suggests that advocacy coalitions will not always be the best way to describe the organisation of actors in a policy domain, even if they were applicable in the Indonesian case.

Third, and related to the two points above, there appears to be a danger of circular logic in thinking about actors' belief systems. The definition used by Sabatier, which is cited above, defines members in terms of shared belief systems and coordinated activity. It is assumed that the second is largely a consequence of the first. Yet one of the ways used to find evidence for actors' belief systems in case studies (e.g., Mawhinney 1993) is to deduce it from their activities. In other words there is the potential of identifying beliefs partly from activities and then explaining these same activities by the beliefs. It should be noted that even if the

proponents of the ACF do not explicitly recognise this problem, they propose a mechanism to address it, which is using content analysis of the records of public hearings to measure change in actors' beliefs over time (Sabatier and Jenkins-Smith 1993: 237-57).

In conclusion, the Indonesian case study provides support for the three hypotheses concerning coalitions, and more generally confirms the validity of focussing on policy domains over a period of a decade or more, as a way to understand policy change. The ACF model could be improved by defining actors as representatives of institutions, rather than individuals acting in their own right. A specific hypothesis on coalition formation can be formulated as follows:

Hypothesis: The existence of recurrent oppositional issues in a policy domain favours the formation of advocacy coalitions.

Finally researchers should be careful to avoid tautological reasoning when describing the belief systems of actors. To the extent possible, beliefs should be extracted from documents and interviews rather than being deduced from actions.

4.7.2.2 Policy Change

The ACF views policy change as the result of two processes. First, coalitions seek to expand their resources and engage in policy learning to increase their influence within the domain, with the objective of translating their belief systems into governmental programmes. Second, changes outside the domain may influence the resources and constraints of actors in the domain. There are two hypotheses concerning policy change:

Hypothesis 4: The policy core (basic attributes) of a governmental programme in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that initiated the programme remains in power within that jurisdiction – except when change is

imposed by a hierarchically superior jurisdiction.

The relative strengths of coalitions in a domain will rarely be sufficiently changed by events in the domain to allow for policy change. External events will usually be required.

Hypothesis 5: Changing the policy core attributes of a governmental programme requires both (1) significant perturbations external to the sub-system (e.g., changes in socioeconomic conditions, system-wide governing coalitions, or policy outputs from other systems), and (2) exploitation of those opportunities by the (previously) minority coalition within the subsystem.

Implicit in these two hypotheses is the idea that governmental programmes can be described in the same way as actors' belief systems with normative and policy cores and secondary aspects. This is consistent with Knoepfel (1995: 140-7) who describes programmes as constituting a core of objectives, an inner layer of success indicators and policy tools and an external layer of organisation, financing and administrative procedures. It is assumed in Hypothesis 4 that an advocacy coalition seeks power to translate its beliefs into policy and that it will not change core beliefs to retain power, although it may abandon secondary aspects (Sabatier 1993: 34).

The Indonesian case provides strong support for Hypothesis 4 and partial support for Hypothesis 5. Governmental policies on forests in Indonesia are based on the 1967 Basic Forestry Law which has been unchanged for 30 years. This stability in policy is linked to institutional and political stability. The President had been in power since 1965. The dominant coalition in the forest policy domain has been in place for decades. While these factors remain constant, major policy changes in the Indonesian forest policy domain seem unlikely.

The Indonesian case does not provide a full test of Hypotheses 5 because by 1997 certification had not led to policy core change, which is defined in the ACF as change in fundamental policy

positions concerning the basic strategies for achieving core values within the domain.²⁹ However, as mentioned above, if the LEI certification is successful the Ministry of Forestry may modify policy core beliefs concerning its role in monitoring forest concessionaire performance and partial deregulation of concessions associated with certification. This would constitute policy core change, and it will have been preceded by both the factors mentioned in Hypotheses 5. External perturbations include changes in a relatively stable parameter (reduction of forest resources), changes in international public opinion, and international market concerns about tropical timber. The nomination of Mr Djamaludin as Minister of Forestry was an important change in the domain. As noted by Sabatier and Jenkins-Smith (1993: 222):

Although most political appointees raise barely a ripple within a subsystem, those who combine extensive knowledge of a subsystem with technical and political skill can produce waves of some magnitude.

Mr Djamaludin, who is a trained forester and served as Director General of Forest Utilization before being named Minister of Forestry, meets at least two of these criteria. The opportunities presented by these changes were certainly exploited by the Environmental Coalition, which responded positively to the invitation by Mr Djamaludin in 1993 to develop a certification programme.

4.7.2.3 Coalition Learning

In the ACF, policy learning involves revisions of the belief systems of actors resulting from experience. The process **within coalitions** has been described in the following way:

Changes in the distribution of beliefs within a coalition will generally start with individual learning or turnover, be resisted by group dynamics and then get diffused throughout the group. Diffusion depends on the rate of turnover, the compatibility of information with existing beliefs, the persuasiveness of the evidence and the

political pressures for change (Jenkins-Smith and Sabatier 1993b: 42).

Learning **across coalitions** is seen as a function of three factors: the level of conflict, the analytical tractability of the issue and the presence of a professional forum for debate. The ACF has six hypotheses concerning coalition learning. The Indonesian case study has provided data allowing a discussion of three of these.

The first hypotheses is:

Hypothesis 6: Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that:

- i) Each has the technical resources to engage in such a debate; and that
- ii) The conflict be between the secondary aspects of one belief system and core elements of another or, alternatively, between important secondary aspects of both belief systems.

Examination of this hypothesis presents a difficulty in view of the fact that the ACF does not describe the intensity of conflicts in terms of specific behaviour patterns of actors, but rather in terms of their belief systems. Severe conflicts involve opposition of core beliefs, and less severe conflicts concern secondary aspects (Jenkins-Smith and Sabatier 1993b: 49). There is a danger of circular reasoning if one uses a comparison of belief systems to identify conflicts and then seeks

²⁹ In this thesis certification is considered to fit within the secondary aspects of a belief system, which are defined in the ACF as instrumental decisions and information searches necessary to implement the policy core. It could be argued that the adoption of certification as a policy instrument signifies changes in the policy core, as one of the illustrative components of this core is priority accorded to various policy instruments. However, it seems logical to interpret this as the priority accorded by actors to **categories** of policy instruments (e.g., regulatory, communication, etc.) while placing **individual** policy instruments, such as certification, under secondary aspects of belief systems.

to explain the same conflicts in terms of the belief systems. In order to avoid this problem it would be better to have independent methods for identifying conflicts and belief systems. Belief systems have been discussed in Section 4.6.2. The work of Kriesi (1996; Kriesi and Wisler 1996), who identified a range of types of “protest events” from content analysis of the popular media, is one example of a method for classifying conflicts.

In Indonesia, the fundamental differences between the belief systems of the Forestry and Environmental Coalitions might lead an observer to predict a high level of conflict. However, as discussed in Section 4.4, this is not the case. Rather, it appears that the dominant coalition has used its influence to avoid issues such as tenure and forest revenue getting onto the policy agenda at all. The fact that forest management in general and certification in particular are on the policy agenda, is probably because both coalitions see problems in this area and want to make improvements. The policy learning that has occurred in Indonesia has been on an issue where the level of conflict is relatively low. Another factor may be the inherent intractability of highly complex issues such as tenure reform.

As noted by Jenkins-Smith and Sabatier (1993b: 51):

...intractable issues permit a wide range of plausible analytical positions, allowing subsystem participants with conflicting belief systems to promote and defend their conflicting analytical claims with relative impunity. Thus intractability serves to **decrease** the range of conflict within which belief system adjustment and policy learning take place.

In addition, the fact that the Environmental Coalition had the technical resources to engage in the debate (contrary to the situation at the time of the Indonesian TFAP meetings in 1990 when fewer NGOs had fewer employees who were technically trained in forestry), seems to have been a factor in policy learning.

In conclusion, it seems reasonable to conclude from Indonesia that a low to medium level of conflict is optimal for policy learning. The

absence of conflict is unlikely to encourage learning and the dominant coalition is able to keep highly contentious issues from reaching the policy agenda at all. There is also support for the idea that both coalitions need to have adequate technical resources for policy learning to occur.

There are two other, related hypotheses on policy learning:

Hypothesis 7: Problems for which accepted quantitative data and theory exist are more conducive to policy-oriented learning than those in which data and theory are generally qualitative, quite subjective, or altogether lacking.

Hypothesis 8: Problems involving natural systems are more conducive to policy-oriented learning across belief systems than those involving purely social or political systems because in the former many of the critical variables are *not* themselves active strategists and controlled experimentation is more feasible.

Both these hypotheses have an element of circularity in them. A critical reading could amount to saying that it is easier to learn about problems that are simple than about complex problems. However, in distinguishing between qualitative and quantitative data in Hypothesis 7, the authors of the ACF have sought to minimise this circularity.

The Indonesian case study throws an interesting light on the Hypothesis 8. The conflicting figures on the area of forests in Indonesia and on the national deforestation rate have been presented in Section 4.2. Ascher (1993: 13) has argued that the lack of reliable information on these issues and on forest revenue collection arises not only because of technical problems but also as a deliberate strategy of the dominant coalition.

[The situation] is a both a potential embarrassment and the object of concerted opposition (especially from international donors). Therefore the Ministry of Forestry and other agencies have an incentive to suppress, restrict or simply neglect to gather relevant information.

Research for the case study did not provide any independent corroboration of Ascher's views. However Ascher at least raises the possibility that the dominant coalition might seek to protect its position by restricting the availability of information on problems involving natural systems, thus making policy learning more difficult. A similar situation has been observed in the US energy domain where it appears impossible to obtain agreed data on the size of US oil and gas reserves:

Given the variety of estimates and estimators to choose from, the participants in energy policy pick the one that advances their own preferences. Estimates have thus been the servants of policy perspectives. We have been able to find no evidence that estimates exert any dominant or independent influence on policy decisions. The repeated calls for credibility in data as prerequisites to intelligent policy-making mask this fundamental conclusion to which we have been drawn (Wildavsky and Tenebaum 1981: 299).

This suggests that Hypothesis 8 may be questioned. Even if problems relating to natural systems are perhaps inherently more susceptible to policy learning than purely social or political ones, it is necessary to consider the possibility that dominant coalitions may interfere with data collection and distribution to impede policy learning, thus reducing or negating the difference.

The last hypothesis to be examined concerns the role of technical information and policy brokers:

Hypothesis 12: Even when the accumulation of technical information does not change the views of the opposing coalition, it can have important effects on policy – at least in the short term – by altering the views of policy brokers or other important governmental officials.

Although the Indonesian case does not provide sufficient information to allow testing of this hypothesis, it does give some interesting examples of the activities of policy brokers. It is

implicit in the hypothesis that policy brokers will be government officials, although Sabatier (1993: 27) mentions the possibility of others playing this role. In the Indonesian case two brokers have been identified: Dr Emil Salim and the NRMP. Both had governmental links; Dr Salim is a former Minister and NRMP is a joint project of the Ministry of Forestry, the National Planning Agency and USAID. However neither is a government official and one is an institution rather than an individual.

The two policy brokers have played different, but complementary roles. Dr Salim's role has been largely political and administrative, bringing the LEI working group together and helping it negotiate with the Ministry of Forestry. Dr Salim was undoubtedly helped in his task by his background both as a government official and as somebody who was familiar with, and credible in the eyes of, national and international NGOs having served on panels such as the Brundtland Commission and The World Commission on Forests and Sustainable Development.

NRMP's activities were more technical and involved commissioning a key report on certification, which provided background information for the development of the LEI programme. The report was first produced as a draft in June 1994 as discussions on certification were getting under way and focussed on trade and environmental policies that could affect certification in Indonesia. It was widely circulated before being published in 1997 (Bennett *et al.* 1997). Although NRMP's activities were basically technical the programme maintained close links to the Ministry of Forestry (where its office was located) and to LEI. The NRMP forestry advisor provided various informal services to LEI, such as checking English translations of documents. The two policy brokers worked closely together and appear to have shared information and ideas regularly.

The Indonesian case thus confirms the importance of policy brokers and suggests that two kinds of brokers may be identified – technical and political. Sabatier has identified two roles for brokers: keeping conflicts within acceptable limits and finding reasonable solutions to problems. It could be argued that political brokers would tend to focus on the first problem and technical brokers on the second. The Indonesian case also suggests that brokers who have links across advocacy coalitions may be particularly well placed to be effective.

Chapter 5

Forest Certification in Canada

In this Canadian case study, the Advocacy Coalition Framework (ACF) model was applied to study the policy process leading to the development of a forest certification programme between 1993 and 1997. In Canada, both the primary and secondary literature on forestry in English or French is abundant and readily accessible, which facilitated the compilation of information. Data collection was carried out during four trips to Canada from 1995 to 1997, totalling approximately three months. This included three field visits to forests in New Brunswick and two in British Columbia, as well as participation in numerous meetings and one conference on certification.

5.1 HISTORICAL OVERVIEW OF FOREST MANAGEMENT AND POLICY IN CANADA

Analysis of policy change using the ACF requires a perspective of a decade or more, and a focus on policy “subsystems” or domains as the unit of analysis. Unlike in Sweden or Indonesia, the ACF has already been used in Canada to study policy change in the forest sector in Alberta, British Columbia and Ontario (Hoberg 1996a; Lertzman *et al.* 1996; Wellstead 1996), and this work provided useful background for the case study. Canadian scholars have also analysed forest policy domains both at the national level (e.g., Howlett and Rayner 1995) and at provincial levels (e.g., Dellert 1994; Levy 1994).

This chapter focuses on the national policy domain, which is the level at which the forest

certification scheme was developed, but also examines the situation in two provinces: British Columbia and New Brunswick. These provinces provide contrasting examples of forestry, forest policy and approaches to certification. Section 5.1 supplies a brief overview of the evolution of forestry in Canada as background. The subsequent sections present a more detailed discussion of current policy issues and actors in Canadian forest policy domains.

The history of forest management and forest policy in Canada has been described by a number of authors (e.g., MacKay 1985; Kimmins 1994, 1997; CFS 1997; Hessing and Howlett 1997). These authors mention a number of historical “periods” or “dominant paradigms” in Canadian forestry. There are some differences between researchers about definitions and dates, but there is broad agreement on when these periods occurred and how they can be characterised. It should be noted that from a theoretical viewpoint these periods should simply be considered as an heuristic tool; the authors mentioned above do not provide any analysis of the forces driving movement from one period to another. The account below is based on a publication of the Canadian Forest Service (CFS 1997: 24-47). Five stages covering periods from the 17th century to the present are discussed: “unregulated exploitation”; “regulation for revenue”; “conservation”; “timber management”; and “sustainable forest management”.

The initial period of forestry in Canada has been described as “unregulated exploitation”. However, this is not strictly accurate as the first

forest policy for North America (apart from the unwritten policies of First Nations³⁰) was that of the British government of the 17th century, which adopted legislation reserving large trees marked by agents of the Crown for masts for the Royal Navy. White pine (*Pinus strobus*) was in particular demand for masts. The American Revolution ended Britain's supply of timber from New England and led to increased exploitation of Canadian forests. Britain's dependence on Canadian timber for shipbuilding increased during the Napoleonic wars, because France closed the Baltic ports to British trade in 1806, thus cutting off an alternative supply source. By 1811, the Canadian timber export trade to Britain was well established and settlers were moving west in search of new supplies. The only regulations in force at the time concerned timber grading for export and the appointment of official surveyors.

The second period, of "regulation for revenue", began in 1826 with the adoption of legislation by the colonial authorities providing for the payment of "royalties" for cutting timber on Crown land. Minimum diameters for trees to be cut on Crown lands were also established. This legislation provided government with a secure and potentially important source of revenue. The British North America Act of 1867, which created the Dominion of Canada, supplied the basis for provincial jurisdiction over Crown lands and the revenue from them. Provinces, starting with Ontario, New Brunswick and Quebec, had already begun to establish forest tenure and revenue systems based on timber licences. However there were few limits on harvesting and mechanisms were inadequate to deal with conflicts between different users.

By the late 19th century, there was increasing concern in government and some timber industry circles about forest depletion, and the "conservation" period began. In the 1860s, one Canadian timber exporter described the situation with regard to white pine as:

I know that the idea prevails on the American side of the line that the area of timberland is so great that supplies are practically exhaustless, but this idea I regret

to say is not borne out by the facts... There is only one thing sure that our magnificent forests of pine are all about gone (Little cited in MacKay 1985: 31).

When the American Forestry Congress was held in Montreal in 1882, the theme was the need to conserve and manage forest resources. After the conference, forestry techniques from Europe began to be introduced into Canada, and the need for professionally trained foresters was increasingly recognised. In 1900, the Canadian Forestry Association was founded to promote forest conservation and management. The first National Forestry Convention was held in Ottawa in 1906 and participants, including the Prime Minister of the time, stressed the need to professionalise forestry. Canada's first forestry school was established at the University of Toronto the following year and, in 1909, Quebec established the country's first provincial forest service. The "conservation" period saw the introduction of forest inventories and fire protection programmes.

By the 1930's, the data from these inventories showed that forest depletion was becoming a significant problem in some areas. A number of provinces (including New Brunswick and British Columbia) appointed Royal Commissions to examine this issue, and gradually the forest tenure system was modified to promote sustained yield forestry. By the 1960s most provinces had adopted a tenure system in which long-term rights to log Crown land were granted to licensees in exchange for a commitment to practise management planning and silviculture. However, in practice until the 1970s, almost all forestry in Canada was based on harvesting mature stands of natural forest, and little emphasis was placed on regeneration and silviculture. Concerns among the forestry profession about a lack of regeneration of logged-over stands led to a national Forest Regeneration Conference being held in Quebec City in 1977, where calls were made for more

³⁰ First Nations is the term used to describe Aboriginal or indigenous people of Canada.

intensive forest management. The federal government supported the provinces' efforts in this area by funding research and contributing to management and regeneration costs.

By the early 1980s, increased public concern about the environment (both in Canada and internationally), and demands by users other than industry (e.g., for recreation and hunting) led to increasing challenges to the dominance of timber management. In response, attempts were made to move towards a forest management framework that considered the forest's multiple uses and functions.

According to the researchers mentioned at the beginning of this section, the "sustainable forest management" period began in the late 1980s and continues today. An important event was the 1989 Canada Forestry Act, which established (for a brief period) a federal Department of Forestry and required the Minister of Forestry to promote sustainable development. In 1992 the Canadian Council of Forest Ministers adopted a National Forest Strategy, which brings together provincial forest ministers (CCFM 1992). The Strategy focussed on the need for an integrated multiple-use approach to forest management with stronger public participation in decision-making. The goal of the Strategy was:

...to maintain and enhance the long-term health of our forest ecosystems, for the benefit of all living things both nationally and globally, while providing environmental, economic, social and cultural opportunities for the benefit of present and future generations (CCFM 1992: 7).

The strategy included 96 specific commitments to be achieved within five years (including the development of a certification system). An evaluation carried out in 1997 found that most of these had been implemented, at least in part (NFSC 1997). By the end of that year, forest legislation in four provinces – British Columbia, Ontario, Saskatchewan and Quebec – had been modified in line with the principles of the Strategy.

The early years of the "sustainable forest management" period also saw numerous conflicts over logging. In one high-profile incident in 1993, over 800 people were arrested on Vancouver Island for protesting against logging in Clayoquot Sound (Hessing and Howlett 1997: 116). It should be noted that some NGOs and academics (e.g., May 1998, Lertzman *et al.* 1996) do not agree that the transition to a "sustainable forest management" paradigm has been made. They argue that timber management is still the priority in most provinces, and that in British Columbia a policy of "liquidation" of old-growth forests and conversion to plantations is being followed despite rhetoric to the contrary.

In 1993, the Canadian Standards Association began to prepare a standard for forest certification in Canada through a working group that included a variety of actors including provincial governments, industry, First Nations, scientists and NGOs. This process was completed by October 1996 and is the main subject of this chapter.

Some Canadian analysts have suggested that pressures are now mounting for a replacement of the "sustainable forest management" paradigm:

The...paradigm for forestry is generally successful in sustaining a variety of desired values. However, it has generally not satisfied all of the values of a wealthy "post-industrial" society. Ecologically based forestry does not necessarily maintain the aesthetics of stands and landscapes through the rotation, and does not necessarily achieve what society thinks it means by "biodiversity". Nor does this type of forestry conserve and sustain the "spiritual" values of "old-growth" forests. As a result, there are social pressures to develop yet another paradigm of forestry, "social forestry". The essence of this paradigm, as perceived by the environmentally conscious members of the Canadian public, appears to be forestry that "respects nature", sustains biodiversity",

maintains “late seral or old-growth” forest conditions, minimizes ecosystem disturbances, and maintains the aesthetic and spiritual values of stands and landscapes essentially unchanged (Kimmins 1994: 4).

Whether or not a new period of “social forestry” will begin (or indeed, whether sustainable forest management is rhetoric or reality), it can be concluded that forestry in Canada has undergone significant changes since the Dominion of Canada was established in 1867. An analysis by the Canadian Forest Service concludes that the pace of change is increasing (CFS 1997: 38). It is thus in a context of change that forest certification has emerged. Before discussing the certification programme, it is necessary to review the relevant Relatively Stable Parameters and External System Events, as well as the policy domain actors and structure, following the ACF approach.

5.2 RELATIVELY STABLE PARAMETERS

5.2.1 Basic Distribution of Natural Resources

Canada is a vast country with a land area of 921.5 million ha, of which 417.6 million ha are classified as forest land (CFS 1995: vi). The population was 29.8 million in January 1996, giving Canada an average population density of 3.2 inhabitants per square kilometre. The population is unevenly distributed, with over 85% living within 350 kilometres of the US border (EIU 1996: 23). The 12 forest regions in Canada are diverse, ranging from the tall coastal rainforests of British Columbia to stunted tree stands in the Arctic. A total of 165 tree species grow naturally in the country (CFS 1994b: 9).

The Canadian government definition of “forest” is rather broad and production-oriented.³¹ It includes open tree formations that would be classified by FAO as “other wooded land”. In consequence, FAO figures for the forest area in

Canada are lower than Canadian data. FAO lists the forest area of Canada as 244.6 million ha, placing Canada second in the world after the Russian Federation in its endowment of temperate forests, and third after Brazil in terms of total forest area (FAO 1997b: 184, 186). FAO figures (1997b: 189) for Canada show a slight annual increase of 0.1% in forest area over the period 1990-1995. This increase is partly due to reforestation, and partly due to changes in inventory methods (Lowe *et al.* 1994: 6).

Forests have been classified into several categories by function (Table 5.1).

Forest lands that are capable of “producing a merchantable stand of timber within a reasonable time frame” (which is not specified) are classified as “timber productive”, or “commercial”. Not all timber productive forests are economically accessible, or contain desired timber species, so a distinction is made between the general category of timber productive forests and “wood productive” forests which are presently suitable and available for timber production (Lowe *et al.* 1994: 66-9).

Sixty-three per cent of the forest cover is composed of softwoods, 15% of hardwoods and 22% is classified as mixed woods. Widespread cyclical disturbances such as wild fires and insect infestations tend to result in even-aged stands, particularly in the boreal regions. In terms of ownership, 71% is owned by the provinces, 23% by the federal government and the territories, and the remaining 6% belongs to 425,000 private forest owners, mainly in eastern Canada (CFS 1997:6). Quebec has 22% of Canada’s forest land, British Columbia 21% and Ontario 17%. However standing volumes of timber are higher in British Columbia, which has 41% of the national total, followed by Quebec with 17% and Ontario with 14% (Lowe *et al.* 1994: 6).

New Brunswick and British Columbia have very different forest types and forest industries.

³¹The Canadian Council of Forest Ministers defines “forest land” as: “land primarily intended for growing, or currently supporting, forest. It includes land not now forested such as clearcut lands, northern lands that are forested but not intended for any commercial forestry use, and plantations” (CCFM 1994: 3).

Table 5.1 Canadian Forest Lands Classified by Function

Forest function	Area (subtotal) million ha	Area (total) million ha
Heritage forests (protected from harvesting by legislation. Includes national and provincial parks and other protected areas)		22.8
Commercial Forests (capable of producing timber and non-timber products, also referred to as “timber-productive” forests)	118.9	237.2
<i>Managed forests</i> (currently managed for timber production, also referred to as “wood productive” forests)	90.7	
<i>Unallocated forests</i> (currently unallocated and unaccessed)	27.5	
<i>Protection forests</i> (unavailable for harvesting because of a need to protect non-timber values)		156.2
Open Forests (small trees, shrubs etc. Not used for timber harvesting)		
TOTAL FOREST LAND		416.2

Note: There are some discrepancies between the figures in this table, taken from the 1993 Canadian Forest Service (CFS) data, and those in more recent CFS reports (CFS 1995, 1997). The latter reports both give the total area of forest land in Canada as 417.6 million ha and the total area of “commercial forest” as 244.6 million ha. Unfortunately however, they do not provide a breakdown of forest area by function. As all three reports are based on 1991 forest inventory data, these differences are surprising.

Source: adapted from CFS 1994b: 9.

Most of New Brunswick’s forests are classified as Acadian – 47% are listed as hardwood, 24% as softwood and 29% as mixed wood. The total area of forest land is 6.1 million ha and the annual harvest volume in 1995 was 10 million cubic metres. Ownership is evenly divided between private and Crown lands. New Brunswick has a long history of forest exploitation dating back to the 18th century and the large white pines, which were in demand for shipbuilding, are now rare. Most forests have been managed through several rotations (Sandberg 1992).

In British Columbia the forest area is much larger (60.6 million ha) and more diverse, with six major forest types – 89% of the forests are classified as softwoods and 95% of forests are on Crown lands, owned by the province. Forestry has developed more recently than in New Brunswick and large areas of “old growth” forests remain. These provide the bulk of the province’s timber. The annual harvest level in 1995 was 74.5 million cubic metres CFS 1997: 104-107.

Despite the abundance of Canada’s forests, resource scarcity is becoming an issue. Writing of the situation in British Columbia, the Dean of the University of British Columbia Forestry Department noted:

Each hectare seems to face multiple demands – from local residents, from the province as a whole, and from the international community. The increased scarcity of land logically implies that other productive factors – knowledge, capital and labour – should be substituted for land to produce the desired outcomes, whether environmental values or timber production. Government ownership and control of land in British Columbia has meant that the price system has not been able to signal the needed changes. Like a fault line that has accumulated strain over years of tectonic action, the British Columbia forest sector is close to rupturing (Binkley 1997: 25).

Similarly, in New Brunswick, the Head of the Provincial Forest Products Association has been quoted as saying, “Every tree has a company’s name on it, and a destination” (Cater 1997: 6). Ross (1995: 32) has argued that increasing resource scarcity (partly due to inadequate investments in forest regeneration in the past) has provided an impetus for policy change in the forest domain, along with changes in social values.

5.2.2 Basic Attributes of Problem Area or Good

“Excludability” and a good’s susceptibility to quantitative measurement are two basic stable attributes in the ACF. In Canada government owns most of the forests and commercial timber production is carried out within a tenure system under which harvesting rights are predominantly allocated to large companies (Ross 1995: 16). The tenure system does not allow licensees to exclude members of the public from access to Crown lands for the purposes of hunting, recreation, etc. In addition, where volume-based rather than area-based licences are granted, two licensees may seek to log in the same area. Despite these examples of limits to excludability, in Canada (contrary to Indonesia) the basic mechanisms to control timber harvesting are in place and operational.

Quantitative data on Canadian forests are widely available, even though the figures are not always consistent, as noted in the previous section. The forest inventory system has been criticised by Canadian foresters for being outdated in terms of estimating wood supply, growth and yield, and for being too limited in scope to properly assess the full range of forest values (e.g., Rotherham *et al.* 1993). Certainly, the definition of “forest land” cited in the previous section could be criticised in terms of neglecting non-timber values. The 1992 National Forest Strategy included the objective of improving forest inventories, especially with respect to non-timber values, but a 1997 evaluation report on the Strategy noted that little progress had been made in this area (NFSC 1997: 19).

5.2.3 Fundamental Cultural Values and Social Structure

The ACF assumes that basic cultural values and social structures are relatively stable, and that changes occur over decades. This appears to be the case in Canada. Basic cultural values include support for democratic government and a federal political system (McNaught 1988: 382-408). Canada’s population is now multicultural, although most of the original settlers were English and French. The concept of a “cultural mosaic” predominates in contrast to the American “melting pot” (EIU 1996: 23). Canada has grown gradually as a nation, starting with the adoption of the British North America Constitution Act by the British Parliament in 1867, under which the colonies of Ontario, Quebec, Nova Scotia and New Brunswick joined together to form the Dominion of Canada. Other colonies and territories joined, the last was Newfoundland in 1949. In 1931, Canada became autonomous from the UK. In 1982, the Canadian Constitution was “patriated” from Westminster to Ottawa in the form of the 1982 “Constitution Act”, thus severing constitutional links with the UK although the UK monarch is still the nominal head of state.

Although the basic cultural values and social structure of Canada are stable, relationships between the provinces and the federal government in Ottawa have often been contentious. The most important recent example of this is the relationship between Quebec and the rest of Canada. Various efforts at constitutional reform over the last decade have failed either to satisfy Quebec, or the other provinces (or both), and no solution to the “Quebec problem” is in sight (EIU 1996: 7)

In 1995, Canadian GDP per capita stood at C\$26 447 (approx. US\$19 600). The economy had experienced a deep recession in the early 1990s, but began to grow again at an annual rate of 2.2% in 1995. From 1993, the federal government has introduced extensive spending cuts to reduce the budget deficit. Similar developments have occurred in many provinces. Exports (particularly to the USA) constitute 37% of GDP, which is the highest percentage in

OECD countries. It is predicted that exports will continue to be the dominant growth sector of the economy in coming years (EIU 1996). Canadian dependency on exports is one of the factors that must be considered in any policy analysis of the forest sector.

There are significant differences in the nature and size of provincial economies and forest sectors. In New Brunswick, one of Canada's poorest provinces (Brock 1996), forestry (including both direct and indirect employment) provides one job in 12. The figure for British Columbia, a much more prosperous province, is one job in 10, whereas in Alberta it is only one job in 40. Total value of exports from New Brunswick in 1996 was C\$2 billion (US\$1.48 billion) with 69% going to the USA, 13% to the EU and 6% to Japan. The main exports were pulp, and paper. In British Columbia the value of exports in 1996 was C\$14.9 billion (US\$11 billion), the majority of which was softwood lumber. Pulp and paper together amounted to 34% of exports. The main export markets are the USA (56%), Japan (24%) and the EU (9%) (CFS 1997: 104, 107).

5.2.4 Basic Legal Structure

5.2.4.1 National and Provincial Structures

Canada is a constitutional monarchy with the UK monarch as the nominal head of state, although in practice it is a sovereign nation. Government has a federal structure, with ten provincial governments and two northern territories. The provinces have considerable autonomy and have jurisdiction for education, provincial taxation and various other matters. They also control the Crown lands within their boundaries, and the natural resources (including forests) on these lands. The two northern territories do not have the same level of autonomy and are controlled and administered by the federal government in Ottawa. The Northwest Territories is to be divided in half in 1999,³² creating the Nunavut Territory as a semi-autonomous region for the indigenous Inuit. The creation of Nunavut is an indication that land

claims by the Inuit and other "First Nations" peoples are gaining increased recognition from the government and the courts, at both federal and provincial levels.

The federal government has responsibility for various matters including defence, international relations and the regulation of trade and commerce. The executive branch of government is made up of a cabinet of ministers headed by the Prime Minister. There have been forest ministries twice for brief periods in Canadian history, but the normal situation has been for forestry to be handled at the federal level by a Minister of Natural Resources, and this is the case at present.

The legislative branch consists of a parliament (the House of Commons) and a senate. The House of Commons is formed from members who are elected by constituencies, as in the UK. Provincial governments have a similar structure to the federal government, although none has a senate. Canada has an independent judiciary, with a Supreme Court, and federal and provincial courts.

The main political parties are the Liberals (centrist), the Progressive conservatives (moderate conservative), the Reform Party (conservative), the Bloc Québécois (separatist) and the New Democratic Party (social democrats). Traditionally, the Liberal Party has tended to dominate at the federal level and its current leader, Mr Jean Chretien has been Prime Minister since 1993. At the provincial level the Liberals, Conservatives and NDP tend to dominate in the legislatures (EIU 1996: 10-14).

The signature of the Free Trade Agreement (FTA) with the USA in 1989 was politically and economically important for Canada in view of the close links between the two countries. The agreement provides for a complete elimination of border tariffs on trade between the USA and Canada by 1999, providing more than half of their manufacturing costs are incurred in either country. The agreement also includes a dispute resolution mechanism that has been used by the USA several

³² Nunavut was created in 1999 as planned.

times concerning lumber exports from Canada. The US government has periodically argued that the Canadian forest tenure system constitutes an unfair subsidy to the Canadian forest products industry. A compromise solution was reached on this issue in 1994, whereby quotas were set for Canadian softwood lumber exports to the USA (CFS 1995). The signature of the North American Free Trade Agreement (NAFTA) in 1994 effectively extends the FTA to include Mexico.

5.2.4.2 Structure of the Forest Sector

The 1867 Constitution Act grants ownership and legislative authority to the provinces concerning publicly owned lands within their borders, which amount to 71% of Canadian forest lands and 88% of Canada's commercial (or "timber-productive") forests. Each province is given ownership of "lands, mines, minerals and royalties" (Section 109 of the 1867 Constitution Act cited in CFS 1997: 31) as well as the power to legislate for natural resources.

The federal government's jurisdiction over forests is exercised over the 23% of Canadian forest land it owns (mostly in the Yukon and Northwest Territories), although it should be noted that this amounts to only 2% of commercial forests in the country. The federal government can also influence forestry through its authority over trade and commerce and "Indians and lands reserved for Indians" (Section 91 of the 1867 Constitution Act), as well as its power to make and implement treaties (Section 132 of the Act).

Since 1867, the federal government has periodically sought to use its powers to regulate trade and commerce in order to exert control over the natural resource sector. Eventually, a *modus vivendi* was reached under which provinces control intraprovincial trade, while interprovincial trade remains the jurisdiction of the federal government. The federal government controls natural resource exports, while sharing with the provinces the right to tax company profits. In the past, the federal government has played an important role in subsidising reforestation and forest management activities in the provinces on the basis of specific cost-sharing agreements with provincial governments. However, this activity

was significantly reduced after 1993 because of federal spending cuts, and ended completely in 1997 (CFS 1997: 28-30).

Forest management in Canada is governed by five types of rules: legislation; regulations; common law; forest tenure arrangements; and administrative procedures. Forest legislation is adopted by the House of Commons and provincial legislatures in the form of forest acts, which are statutes describing broad government objectives in forest use, the tenure system and the responsibilities of government officials. Regulations are adopted by Cabinet rather than provincial legislatures or the House of Commons, but also have the full force of law like statutes. They lay out the basic rules for forest management, within the framework of forest acts. Common law provides a legal framework for the interpretation of forest acts and regulations by the courts. It is based on past cases and court decisions. Forest tenure arrangements are specified in legally binding contracts between the provincial government and the tenure holder, sometimes called Forest Management Agreements. Finally, administrative procedures, guidelines and manuals are adopted internally by provincial forestry or natural resources departments to guide forest managers in their daily activities. They do not have the force of law. Forest management is also influenced by the increasing body of environmental legislation and administrative procedures (for example, for environmental impact assessments) (Ross 1995).

In most provinces forestry is governed by one forest act. For example, New Brunswick has the *Crown Lands and Forests Act* of 1980. The situation in British Columbia is more complex, with the 1979 *Forest Act* having been complemented by the 1994 *Forest Practices Code*. Most forest acts only apply to Crown lands (i.e., those owned by the province), but in the cases of British Columbia and New Brunswick the acts contain certain provisions concerning forest management on private lands as well. In most provinces forest management is also influenced by other statutes concerning land-use planning and environmental acts, although forest

departments tend to seek to guard their jurisdiction over Crown lands (Ross 1995: 115).

There are two major categories of forest tenure arrangements in Canada: volume and area-based tenures. Volume-based tenures are relatively short term and less secure than area-based tenures, and are usually allocated to small non-integrated companies. Under volume-based tenures, the government retains most planning and management responsibilities. Area-based tenures are longer term, more secure and are generally allocated to larger integrated companies. Under area-based tenure arrangements, the government allocates many of the planning and management responsibilities to the tenure holder. With the exception of British Columbia,³³ area-based tenures are predominant (Ross 1995: 117). Area-based tenures usually last between 20 and 25 years. They are referred to in British Columbia as “Tree Farm Licences” and in New Brunswick as “Crown Timber Licences”. Different terms are used in other provinces.

A number of terms are used to describe volume-based tenures. In New Brunswick they are called Crown Timber Sublicences, whereas in British Columbia there are several forms, the most important of which are Pulpwood Agreements, Minor Timber Sale Licences and Woodlot Licences. The two main differences between volume-based and area-based tenures are their duration and the extent to which licensees are responsible for planning and management. As with area-based licences, allocation usually depends on the licensee operating (or at least having access to) a wood-processing facility. With volume-based tenures, this facility is often a sawmill rather than a pulp mill. Allocation of the licences is usually by competitive bidding, in contrast to area-based tenures. Depending on the province, licences are granted for 5 to 20 years. In some cases they are not renewable, but even when they are this is less secure than with area-based tenures.

As their name indicates, volume-based licences allocate to the holder the right to harvest a certain volume of timber. The species and area where the harvest is to be carried out are normally specified. In some cases volume-based licences may be issued in areas already covered by area-

based licences. This is the case in New Brunswick, and the sublicensees are normally sawmill operators or owners who have not been able to find sufficient timber supply elsewhere.

With the exception of British Columbia, the obligations of the licence holders to develop plans is much less with volume-based tenures than it is with area-based ones and the requirement is normally limited to annual operating plans. In most provinces, licence holders are required to reforest after logging and to carry out silvicultural treatments necessary to produce a free growing stand. After this has been achieved, management responsibility reverts to the government. In general, rents collected by the government are lower for volume-based than area-based tenures.

Although private forests (often referred to as “woodlots”) only cover 6% of commercial forest land, they provide an estimated 15% of the national annual harvest because they are predominantly located on productive sites (Sanders 1994). Provincial mechanisms for regulating the use of private forests vary significantly across Canada. In New Brunswick, where half the commercial forests are privately owned, Section 29(7.1) of the *Crown Lands and Forests Act* requires the Minister to ensure that private woodlots are being managed to ensure a supply of timber proportional to their area, on a sustained yield basis. The aim is that companies should first seek to purchase timber from private woodlots and only use timber from Crown lands once these supplies are consumed. In the event that a licensee does not purchase the proportion of timber specified in his yearly operating plan from private woodlots, the Minister may reduce the volume available to him from Crown lands.

In British Columbia, the 1979 *Forest Act* provides for regulation of private forests if a holder of a Tree Farm Licence or a woodlot licence also owns private lands. These are to be managed jointly with the Crown lands and subject to the same general regulatory provisions. In addition,

³³ In British Columbia, 75% of the annual harvest is under volume-based agreements (Ross 1995: 126).

Section 216 of the *Forest Practices Code of British Columbia Act* provides for regulatory control over private forests, including establishing conditions to be met before, during and after timber harvesting, even if the private owner does not hold a licence for Crown lands. Particularly in eastern Canada, woodlot owners are organised into associations and some provinces have enacted legislation to allow woodlot owners to form marketing boards to help them survive as small-scale producers in a market dominated by large producers and consumers.

5.2.4.3 The Private Sector

The private sector in Canadian forestry is diverse and consists of contractors, woodlot owners, sawmills and larger integrated companies. The latter are the dominant political and economic actors and this discussion of the private sector focuses on them. The private sector is well organised and has significant political and economic influence, both nationally and provincially (Coleman 1988: 144; Howlett and Rayner 1995). This is particularly the case for the pulp and paper industry, which has had an active national industry association (the Canadian Pulp and Paper Association, CPPA) since 1913. CPPA produces regular reports and data on the industry (e.g., CPPA 1994) and is an active participant in provincial, national and international policy discussions on certification (e.g., CPPA 1996). Since 1992 CPPA has had an office in Europe and has provided extensive financial and technical support for the development of the Canadian Standards Association forest certification standard for Canada (Stanbury *et al.* 1994).

The lumber sector was not organised nationally until the formation of the Canadian Forest Industries Council (CFIC) in 1983, as a federation of provincial forest industries councils to oppose US threats of increased tariffs on Canadian lumber exports to the USA. The most influential provincial lumber industry association is the Council of Forest Industries of British Columbia (COFI). Since British Columbia provides over 60% of Canadian softwood lumber exports (CFS 1997), COFI has also had a *de facto*

role in representing the lumber industry outside Canada. It has several offices in Europe but has been less active in international forestry debates than CPPA, partly because of divisions among in its membership on policy and strategy. In 1991, partly in response to these divisions, the major British Columbia forestry companies (in collaboration with the leading forest workers union in the province) created the “Forest Alliance of BC”, which has been active in promoting the views of the British Columbia industry at the provincial, national and international levels (Stanbury *et al.* 1994).

In addition to industry associations, individual companies have also been able to exert political and economic influence at the provincial level. In most provinces a limited number of vertically integrated companies dominate the forest sector. In New Brunswick the ten area-based licences are held among six large companies (Sandberg 1992: 7) and 13 companies dominate the forest sector in British Columbia (Stanbury *et al.* 1994).

5.3 EXTERNAL SYSTEM EVENTS

In the ACF, four types of External System Events are recognised: changes in socioeconomic conditions; changes in public opinion; changes in systemic governing coalitions; and policy decisions and impacts from other subsystems. All of these can be observed in the Canadian case.

After long periods of growth in the 1970s and 1980s, the Canadian economy experienced a deep recession in the early 1990s. Significant government debt at the federal level (and in many provinces), resulting from high spending in the two previous decades, forced government expenditure cuts (EIU 1996: 20). The Liberal government elected in 1993 imposed cuts in transfer payments to provinces in all areas, including forestry. In the same year the Federal Department of Forestry was reduced in size and merged into Natural Resources Canada. Funding for federal-provincial forestry agreements (which subsidised reforestation activities) ceased in 1996, and federal research funds were also reduced (CFS 1997: 32).

The industry was faced with relatively low but sometimes volatile pulp prices for most of the 1990s and the level of investment in industrial capacity declined over the decade (FT 1998a). However, there was a price rise for both pulp and paper and sawnwood in 1994 and 1995, which allowed companies to post record profits for two years before prices declined again (SAS 1996). The Canadian forest products industry has followed the same pattern of consolidation as in other countries, but at a slower pace. As a result, whereas four Canadian companies ranked in the top 25 of the *Pulp and Paper International* classification in 1981,³⁴ by 1997 the first Canadian company was ranked 45 (PPI 1982, 1997). Some analysts have also suggested that Canadian companies have generally been slower than their Nordic counterparts to invest in environmental improvements in pulp and paper mills (Stanbury *et al.* 1994). Overall, Binkley (1997) has calculated that the forest industry in British Columbia spends 0.7% of gross receipts on research, compared to 1.8% in Sweden.

Natural resources in general, and forestry in particular, play an important role in the Canadian economy. However, their relative importance is declining with the growth of the service and manufacturing sectors (EIU 1996: 16). Even in British Columbia, improvements in productivity and the growth of the manufacturing and service sectors have led to a situation where, by 1991, only 6% of the provincial labour force was employed in the primary sector (Howlett and Brownsey 1996).

The context in British Columbia has been described by political scientists Howlett and Brownsey (1996: 29) in the following way:

In BC a prominent political myth centers on the province being a resource hinterland whose politics revolve around the exploitation of natural resources. Although this view had a basis in fact in the early years of the province, and is perpetuated in every headline setting out the latest conflict between loggers and environmentalists, it has much less basis in present-day political economy realities.

Rather than facing a set of political problems arising out of the old political economy, politicians in BC must grapple with issues that have their origins in the new service sector political economy that has emerged over the last half-century.

According to various academic, governmental, industry and NGO reports, these economic changes have been accompanied by shifts in values of the general public in Canada. Greater emphasis has been placed on environmental issues and public participation in forestry decision-making than in the past (e.g., Barron 1994; CFS 1997: 34; MacWilliams 1997; M'Gonigle 1997). Some analysts have suggested that Canadian natural resource and environmental policies are now being subjected to increasing criticism:

Critics allege that policies have been developed without due regard to the public interest or ecological concerns and that "special interests", especially business, are given preferential treatment in the policy process. These criticisms have not only succeeded in delegitimizing many aspects of the existing system of regulation but have led to demands for new policies and new mechanisms to implement them (Hessing and Howlett 1997: 7).

The fact that most timber production in Canada is on Crown lands has given added relevance to these criticisms of public policies, because these lands officially belong to the public. The export-oriented nature of the industry and the fact that, in British Columbia in particular, NGOs such as Greenpeace have succeeded in "internationalising" the issues, have put the industry under further pressure. In addition, there has been a growing demand from Canadian civil society for increased

³⁴ The trade magazine *Pulp and Paper International* ranks pulp and paper companies every five years on the basis of their total sales of pulp and paper.

transparency and participation in decision-making processes concerning forestry on private land. This provides an example of what is referred to in the ACF as policy impacts from other subsystems. Since 1993, Greenpeace and other environmental groups have been active in Europe (particularly Germany and the UK), criticising Canadian forestry practices. One concrete result of this was that in 1994 both Scott paper and Kimberley-Clark (respectively makers of “Andrex” and “Kleenex” tissue papers) cancelled contracts to buy pulp from MacMillan Bloedel (Stanbury *et al.* 1994). More generally, these NGO activities put pressure on the Canadian government and industry to respond. There is a perception in Canadian industry (which is probably accurate) that “international opinion” judges Canadian forest performance as a country, rather than as a collection of individual, largely autonomous, provinces (Innes 1994). This implies that a national, rather than provincial, response was needed.

In the Advocacy Coalition Framework changes in Systemic Governing Coalitions are seen as a potential force for policy change. There is some evidence of this having occurred at the federal level with the election of a Liberal government committed to balancing the budget in 1993, but this is inconclusive as the previous Conservative government had similar policies. In New Brunswick, the Liberal government of Premier Frank McKenna has been in power since 1987 (Milne 1996), so this does not provide an example of change in governing coalitions either. However in British Columbia, the New Democratic Party under Mike Harcourt, which was elected in 1991, did embark on a number of ambitious changes in policy, legislative and land-use planning procedures in the forest sector. These were stimulated by public criticism of the *status quo* in the province and in its forest product export markets in Europe (Sigurdson 1996). These are discussed below. It does seem that in this case a change in the governing coalition did lead to changes in the forest policy domain.

5.4 THE CANADIAN FOREST POLICY DOMAINS

5.4.1 Actors and Structure of the Domains

There is an extensive Canadian literature on public policy analysis. The most prominent authors in the field are Doern, Wilson and Phidd (e.g., Doern and Wilson 1974; Phidd and Doern 1978). These authors have traditionally focussed on the choice and use of policy instruments. More recently, there has been an increased use of policy network analysis (e.g., Atkinson and Coleman 1989) and several Canadian political analysts have analysed the forest policy domain (e.g., Sandberg 1992; Levy 1994; Howlett and Rayner 1995; Hoberg 1996b; Hayter and Barnes 1997; Hessing and Howlett 1997). Wellstead (1996) has used the ACF to study forest policy change in Alberta and Ontario. Lertzman *et al.* (1996) and Hoberg (1996a) have done the same in British Columbia.

Several elements emerge from these analyses. First, that the key level where policy decisions are made and where actors have tended to mobilise their resources is provincial rather than federal. This is consistent with the basic legal structure in Canada discussed in Section 5.2.4.1. The reduction of federal government resources available for forestry has tended to reduce the importance of the national policy domain. On the other hand, the increase in international discussions on criteria and indicators, a possible global forest convention and trade and environment issues (all areas in which the federal government has taken a leading role) have tended to increase the importance of the domain. It should also be noted that the Canadian Standards Association forest certification system was developed at the national level.

Second, Canadian forest policy domains (both provincial and federal) have been dominated by two major actors: provincial governments and the forest industry. Labour has also been an important actor in some provinces such as British Columbia (Howlett and Brownsey 1996) and Ontario (Levy 1994). Although, as discussed below, there have been conflicts between

government and industry the relationship has largely been cooperative. It can therefore be argued that forest policy domains in Canada have a clientelistic structure, as in Indonesia (see Chapter 4, Section 4.4).

It will be recalled from the Indonesian case that clientelism can lead to State agencies defending particular interests rather than broader public interests, even leading to a situation where public policy is taken over by the private policy of the “client”. There is a preference for informal negotiations and secrecy. The State agency will usually remain responsible for policy formulation and implementation but will do so in close collaboration with its “client”, which has institutionalised channels of access (van Waarden 1992: 44). A number of Canadian analysts have taken the view that the structure of national and provincial forest policy domains has traditionally been clientelistic. For example, writing of New Brunswick, Sandberg (1992: 59) notes:

These liberal concessions to the large sawmillers were aimed at boosting provincial revenue. Paradoxically, however, at times the close connection between sawmillers and the client state at times impeded the collection of revenue.

Similarly, concerning the national forest policy domain Atkinson and Coleman (1989: 62) note that:

Firms and state share the responsibility for the future of the sector. Timber access policies favour larger companies and as such provide a barrier to entry.

Finally, Ross (1995: 111-18) has observed that allocation of timber licences and implementation of regulations tend to be subject to extensive “closed door” negotiations between forest companies and provincial governments, a situation characteristic of clientelistic arrangements.

This clientelistic structure of the forest policy domain was however modified in the 1990s as a result of the socioeconomic changes described

in the previous section. This modification is particularly clear in British Columbia and at the national level. It is less clear in New Brunswick where the service and manufacturing sectors have not developed as much, and interest groups have not developed the same influence as in British Columbia (Brock 1996).

Writing of British Columbia, Hoberg (1996b: 272, 285) describes the situation as:

BC forest policy has traditionally been dominated by bargaining between forest companies and provincial ministries centred around the Ministry of Forests. While environmentalists have played an active role in forest policy disputes, since the late 1960s, as of 1989 they had not penetrated the core of the policy network...The recent shifts of BC forest policy have resulted primarily from significant shifts in the resources available to these different actors. Beginning in the late 1960's the political landscape began to change, with significant consequences for the structure of the forest policy regime and forest policy. Perhaps the most important change has been in public opinion...While reform efforts began in the 1970s, they accelerated greatly in the 1990s, transforming the traditional policy regime that emphasized rapid timber harvesting and economic development into a modern regime where environmental values have been brought into greater balance with developmental ones.

Together with this information, the interviews carried out for this thesis (Table 1 in Annex 5.2) suggest that there are now four major sets of actors in Canadian forest policy domains – provincial forest ministries, labour, the forest industry and NGOs. Although the situation varies from province to province, the general picture of forest policy domains is of one established Forestry Coalition consisting of provincial forest ministries and the forest industry (often joined by labour), facing a new and weaker Environmental Coalition led by NGOs and sometimes involving

other actors such as provincial parks departments and First Nations groups (See Box 5.1).

Box 5.1 The National Forest Policy Domain

Forestry Coalition members

Canadian Pulp and Paper Association (CPPA)
Council of Forest Industries of British Columbia (COFI)
International Woodworkers of America
Provincial Forest Ministries (organised in the Canadian Council of Forest Ministers)
Canadian Forest Service

The National Aboriginal Forestry Association and Wildlife Habitat Canada (NGO) sometimes collaborate with the dominant coalition (e.g., both signed the National Forestry Accord in 1992) but also sometimes act independently.

Environmental Coalition members

Greenpeace
WWF Canada
Sierra Club of Canada
Canadian Environmental Network (which groups a large number of grassroots groups)

Provincial Environment and parks ministries sometimes support the NGO coalition on protected areas issues, but did not intervene in the certification debate.

Sources: Interviews (Table 1 in Annex 5.2); Stanbury *et al.* (1994); CFS (1995, 1996, 1997); Hoberg (1996b); Wellstead (1996)

The resources available to the actors in these coalitions are unequal. The Forestry Coalition controls most of the forest lands in Canada. In addition, in the past the federal government has provided substantial financial support to industry, such as C\$1 billion for the Pulp and Paper Modernization Programme to upgrade plants in the industry (Atkinson and Coleman 1989).

The forest products industry is highly unionised, particularly in the pulp and paper mills and the logging sector. In the pulp and paper mills, membership is divided among several different unions, but in logging the International

Woodworkers of America (IWA) dominates with over 51,000 members. Since the 1970s the unions have taken an increasingly active role in policy debates, generally with a strong focus on job preservation (Ross 1995)

The financial resources of the Environmental Coalition are much less than those of the dominant coalition, and coordination between NGOs has often appeared to be poor. However, international lobbying by Greenpeace, legal actions in British Columbia by the Sierra Club and technical analysis by WWF Canada of gaps in the provinces' protected area systems suggest that NGOs have considerable intellectual capital and good international contacts.

The ACF stresses the importance of belief systems of actors for understanding policy change. The belief systems of the actors in the Canadian forest policy domains can be deduced from interviews (Table 2 in Annex 5.2), governmental reports and various publications and articles (Table 5.2).

The initial image of the Forestry Coalition is that it presents a strong and united front. One key policy document is the *Canada Forest Accord*, signed on 4 March 1992 by the then federal forest minister, all provincial forest ministers, CPPA, COFI and various forestry associations, the National Aboriginal Forestry Association and one NGO (Wildlife Habitat Canada), which is close to industry. This document formed the basis for the National Forest Strategy: *Sustainable Forests: A Canadian Commitment* (CCFM 1992). The goal of both the accord and the strategy is:

to maintain and enhance the long-term health of our forest ecosystems, for the benefit of all living things both nationally and globally, while providing environmental, economic, social and cultural opportunities for the benefit of present and future generations (CCFM 1992: 7).

Most of the strategy is uncontroversial and the majority of the commitments are general and somewhat vague such as:

Table 5.2 Policy Core Beliefs and Secondary Aspects of the Two Advocacy Coalitions in Canadian Forest Policy Domains, 1996/1997

Policy Core Beliefs	Forestry Coalition	Environmental Coalition
Definition of the problem	Need for Canadian forest industry to have long-term access to reliable supplies of raw material to be able to compete in an increasingly competitive international market, and maintain employment levels	Loss of old-growth forests, clearcutting, impacts of intensive forestry practices on biodiversity. Forest management practices need fundamental modification. Industry controls too much forest land
Identification of social groups whose welfare is most critical	Shareholders of forest companies, labour	General public, First Nations
Orientation on substantive policy conflicts	Economic development	Environmental protection
Basic choices concerning policy instruments	Preference for incentives and communication tools, deregulation	Preference for strengthening of regulatory tools
Desirability of participation by various segments of society	The public should be kept informed and have a chance to express their views	More public participation is necessary
Ability of society to solve problems in this policy area	Our knowledge of forestry provides the scientific basis to manage forests to meet the needs of society	Our understanding of ecosystems is incomplete and we are underestimating the impacts of modern intensive forestry on biodiversity
Secondary Aspects		
Decisions concerning administrative rules, budgetary allocations, statutory interpretation and revision	Forest legislation in provinces already provides adequate basis for forestry operations	Legislation needs to be strengthened and discretionary aspects left to Chief Foresters reduced. Funds for establishing new national parks and protected areas need to be increased.
Information concerning programme performance, seriousness of the problems etc.	Performance of companies is adequate, but misunderstood by public. No urgent problems in Canadian forestry.	Biodiversity conservation and loss of old growth forests are urgent problems that have not been properly addressed.

Note: In the ACF, the near policy core is difficult to change but this is possible if experience reveals anomalies. It is made up of fundamental policy positions concerning the basic strategies for achieving the normative axioms of the deep core. Secondary aspects concern instrumental decisions needed to implement the policy core, and are moderately easy to change.

Sources: Interviews; Hoberg (1996a,b); Lertzman *et al.* (1996); Wellstead (1996); CFS (1997); May (1998)

4.1 Industry will work with governments to identify and promote the broad range of economic opportunities for both timber and non-timber products and services (CCFM 1992: 29).

However to characterise the beliefs of this coalition as being forest management that sustains the variety of forest goods, services and functions (as these documents suggest) would be naïve. It is relatively easy to agree on general principles at the federal level. It is at the provincial level where difficult decisions between competing demands have to be made. In this respect New Brunswick and British Columbia present differing situations.

In New Brunswick, the provincial government established the Commission on Land Use and the Rural Environment in 1992 to examine options for improved public participation in decision-making and to promote multiple-use management. After the Commission completed its work, the government came to the following conclusion on forest management:

The government agrees ...that Crown lands must be managed in a way that multiple uses are facilitated and the management system provides for the sustainability of the forest. The current Crown land management strategy that is in place now embodies the concept of multiple use and sustainability. Government objectives for timber production, fish and wildlife habitat, and recreation are presently integrated within the system...**the government agrees that the maintenance of a sustainable supply of timber sufficient to meet industrial demands remains the prime objective of the Crown land management strategy.** (GNB 1993: 13; emphasis added)

It appears from this statement that, although a number of issues and criticisms were raised by NGOs and members of the public during the Commission's work, the Forestry Coalition has been able to maintain its control over the New Brunswick forest policy domain. The coalition's belief system stresses the primacy of timber

production and employment. The Premier has made public references to the need to establish more protected areas in the province and consider other forest values (*Telegraph* 1995), but this has not been followed by concrete measures. Thus, for example, New Brunswick scored an F grade (fail) in both 1996 and 1997 in WWF Canada's national report card, which grades provinces on their progress in establishing new protected areas. (WWF-Canada 1997). This situation is consistent with Sandberg's (1992) analysis of the clientelistic structure of the New Brunswick forest policy domain, which is dominated by six large companies, one of which is part of the Irving conglomerate controlled by KC Irving, reportedly one of the wealthiest individuals in the world (Demont 1992).

As described by Hoberg (1996: 272, 285), the situation in British Columbia is in a state of transition. Although there is a strong and dominant coalition between the Ministry of Forests, the forest industry and labour unions, NGOs and First Nations groups have managed to exert increasing influence. This has occasionally led to splits in the Forestry Coalition, which allow an analysis of the belief systems of the different actors involved. When the New Democratic Party came to power in 1991, Premier Mike Harcourt initiated a series of processes designed to build consensus in the province on natural resource management policies (Box 5.2).

In Chapter 2, Section 2.3, several different types of policy change were discussed. The emergence of the Environmental Coalition can be seen as an example of a change in actors. Under these circumstances, we can predict rapid policy change, and this is confirmed by events. However, there is uncertainty whether the policy change will be incremental or paradigmatic. It appears that the Forestry Coalition prefers the former, while the Environmental Coalition is calling for a paradigm change in forest management.

In some of the conflicts in British Columbia, such as the dispute over logging in Clayoquot Sound, the "battle lines" appeared to be sharply drawn between the Forestry Coalition, intent on maximising timber harvest from the forest, and a looser Environmental Coalition, whose belief system was apparently based on

Box 5.2 Policy Processes in British Columbia to Address Environmental Issues**1. Timber Supply Area Action Plan (1991)**

The report published by the BC Ministry of Forests indicated that harvest levels should be reduced substantially (about 20%) to move to a long-term sustainable yield. Current harvesting levels could not be sustained in the long term as they are based on high-volume old growth stands. In March 1992, amendments to the Forests Act were introduced to reduce the Annual Allowable Cut.

2. Commission on Resources and Environment (CORE)

CORE was established in January 1992 to develop a comprehensive land use plan for the province, through a multistakeholder consultative process.

3. Negotiations with First Nations

The British Columbia Treaty Commission was appointed in April 1993 to facilitate treaty negotiations (which had not previously been undertaken) between the government and First Nations.

4. Clayoquot Sound Science Advisory Panel

After 800 people had been arrested protesting against logging in Clayoquot Sound on Vancouver Island the government set up an independent science advisory panel to recommend a land-use plan for the area. Government later adopted the Panel's recommendations, which were conservation-oriented.

5. Protected Areas Strategy

On 10 June 1993, the government announced a protected areas strategy to allocate 12% of the province to parks or wilderness reserves. This target has been achieved even though the representativeness of the protected area system, in terms of forest types, has been questioned by NGOs.

6. Forest Practices Code

On 9 November 1993, the Premier announced a new Forest Practices Code under which forest practices are subject to stricter provisions, including independent audits by a specially established agency (see Point 7 below). Multiple-use forestry within a landscape ecology framework provides the basis for the Code.

7. Forest Practices Board

An independent agency established in June 1995 to carry out "compliance audits" of licence holders to check whether their forest management practices are in compliance with the Forest Practices Code.

8. Forest Renewal BC

FRBC was announced on 14 April 1994. It involves a fund to compensate local communities and the forest industry for the costs of more environmentally sensitive forestry, as well as promoting alternative economic activities and research. Monies are provided by an increase in stumpage fees.

Sources: Stanbury *et al.* (1994); Fenger (1996); Hoberg (1996b); McKee (1996); Hayter and Barnes (1997)

protection of old-growth forests and biodiversity. However the situation was more complex than this, as shown in the following examples.

On 31 December 1991, the Chief Forester of British Columbia made a decision to reduce the Annual Allowable Cut (AAC) of MacMillan Bloedel's tree farm licence (TFL) 44 by 14% to take into account the need to maintain a range of ecosystem functions. MacMillan Bloedel successfully appealed this decision in the courts, and was supported in this by the International

Woodworkers of America (IWA-the main forest labour union in the province), while the Chief Forester was supported by the Sierra Club, an NGO. The case ended with the Supreme Court of British Columbia deciding in 1993 that the Chief Forester had made his decision without sufficient evidence. The case is particularly interesting because it shows a split in the dominant coalition and because documents submitted to the court can be analysed to indicate the belief systems of the actors involved.

In a detailed analysis of court papers Dellert (1994: iv) argues that:

The closed policy network, dominated by industry, and held together by the shared values of wise-use conservation, fell apart when the Chief Forester re-interpreted sustained yield by considering ecological values in reducing MacMillan Bloedel's AAC in TFL 44.

According to Dellert, the belief system of the Chief Forester of the Ministry of Forests was based on trying to move towards sustainable forest management, balancing ecological, social and economic considerations. The Sierra Club focussed exclusively on ecological issues: environmental protection, biodiversity and old-growth values. The IWA concentrated on employment and made a direct link between volumes of timber harvested and employment levels. Finally, MacMillan Bloedel argued that priority should be given to maximising timber production and developing the forest sector.

If this dispute occurred before the Harcourt government's initiatives had time to take effect, the second major dispute occurred **because** of these initiatives. In September 1995, Price Waterhouse issued a report commissioned by the Forest Alliance of British Columbia (which brings together the 13 major forest companies in the province) claiming that the combined effect of the initiatives outlined in Box 5.2 would be a reduction in the provincial Annual Allowable Cut of 17% over a 10-year period. The report claimed that this would lead to losses of between 23,000 and 71,000 jobs and a reduction of the provincial Gross Domestic Product of up to C\$5.1 billion per year (Price Waterhouse 1995).³⁵ The report was criticised by NGOs. The then Provincial Minister of Forests Andrew Petter was quoted as describing it as politically motivated and fundamentally flawed (*Globe and Mail* 1995).

In another case, only two days after announcing its controversial decision (which was subsequently reversed) to allow logging in Clayoquot Sound on 13 April 1993, the cabinet of Premier Mike Harcourt announced the creation

of the British Columbia Treaty Commission to resolve outstanding disputes and land claims between First Nations and the Provincial Government. The timing may have been coincidental, but if the intent was to divide the new NGO/First Nations coalition, the tactic was successful. By June 1997, Greenpeace activists trying to close down a logging operation on Roderick Island (550 kilometres north of Vancouver) were asked to leave the area by local First Nations representatives in the presence of the media. Several similar events occurred in other areas, apparently partly because First Nations leaders were concerned about protests jeopardising treaty negotiations with the government (*Globe and Mail* 1997).

In conclusion, even if policy domains in Canada may still be dominated by a Forestry Coalition with production-oriented belief systems, the interests of the partners in this coalition may increasingly diverge, as governments are forced to respond to public demands for ecosystem-based approaches to forest management. In addition, NGOs are beginning to emerge as influential actors sometimes in collaboration with others such as First Nations. This trend is particularly clear in British Columbia. The British Columbia case suggests that if new NGO/First Nations Environmental Coalitions emerge, higher levels of government than the Ministry of Forestry (in this case it was the Premier) may intervene in the policy domain to seek to resolve issues or to weaken the new coalition.

From an ACF perspective, the interventions of the Premier in the British Columbian forest policy domain are interesting in light of Hypothesis 4.³⁶ There were several changes in the policy cores of government programmes, as

³⁵ In 1996 provincial employment (direct and indirect) in the forest products industry was 184,000 and the total value of forest product exports was C\$14.9 billion (CFS 1997: 107).

³⁶ *ACF Hypothesis 4*: The policy core (basic attributes) of a governmental programme in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that initiated the programme remains in power within that jurisdiction – except when the change is imposed by a hierarchically superior jurisdiction.

indicated in Box 5.2. In particular, “orientation on basic value priorities” moved from an almost exclusive focus on timber production to a position, which sought to balance timber production with environmental considerations. These changes occurred after both a change in governing coalition and the intervention of a hierarchically superior official (rather than jurisdiction). This suggests that Hypothesis 4 should be modified to incorporate officials as well as jurisdictions. The New Brunswick case is an opposite example. There, the same administration has been in power since 1987, and no major changes in forest policy have occurred over that period.

5.4.2 Current Policy Issues: Problem Definition

In its 1997 annual report the Canadian Forest Service identified a number of trends that were affecting forest policy in Canada, at both national and provincial levels (Box 5.3). Also in 1997, a final evaluation of the National Forest Strategy was carried out which concluded that four issues were of particular importance to the success of the strategy:

- 1) completion of an ecological classification of forest lands;
- 2) completion of a network of protected areas representative of Canada’s forests;
- 3) establishment of forest inventories that include information on a wide range of forest values; and
- 4) developing a detailed system of national indicators for measuring and demonstrating sustainable forest management (NFSC 1997: 1).

In a separate legal study Ross (1995: 69-94) concluded that contemporary issues and conflicts in Canadian Forest Policy could be divided into four categories:

- 1) **Forest tenures:** current tenure arrangements do not give incentives to the licensee to manage cut-over areas or allow for adequate control by forest ministries.
- 2) **Where to log:** land-use planning has been the issue that has generated the most controversy in Canadian forestry in recent years.

Box 5.3 Trends Affecting Forest Policy in Canada

1. Self regulation

An example of this is certification. A system is being developed in Canada under the auspices of the Canadian Standards Association. The international Forest Stewardship Council may also become involved in certification in Canada.

2. Public involvement

A number of provinces are developing public consultation processes to increase citizen’s involvement in forest management.

3. Non-traditional forest values

Because of changes in public values, forest managers must consider a much broader set of social, ecological and spiritual values than in the past.

4. Increasing globalisation

The forest industry must continually adapt to new developments in markets around the world.

5. Increasing scientific knowledge

There is a greater understanding of the complexity of forest ecosystems and this has led to concepts such as landscape ecology affecting how forest managers think about their work.

6. Fiscal restraint and deregulation

Government resources for research and monitoring of forest practices are being reduced.

7. Impact of environmental and land-use legislation

Forest planning is increasingly being influenced by overall land-use planning and environmental impact assessments are being required of forest ministries.

8. Forest preservation

There are increasing public demands for parks and protected areas for recreation and biodiversity protection.

9. Aboriginal and private land concerns

First Nations’ efforts to obtain land rights are meeting with increasing success. There is a growing recognition of the role of private woodlots in forest management.

10. International influences

Forests are increasingly a focus of international policy debates, and Canada plays a key role in such discussions because of the importance of its forests and forest products trade.

Source: CFS (1997: 32-39)

- 3) **How much and when to log:** timber management planning has become more difficult with downsizing of government departments and the reduction of the AAC in some provinces as old-growth forests become depleted.
- 4) **How to log:** environmental impacts. There have been an increasing number of conflicts about the environmental impacts of logging which show that the transition between a model based on “sustained yield” of timber and “sustainable forest management” is not yet achieved in practice.

These four categories are broadly consistent with both the Canadian Forest Service and the National Forest Strategy Evaluation analyses mentioned above, and the results of interviews carried out for this thesis (Table 2, Annex 5.2).

Because of the diversity of situations in different provinces, it is difficult to produce a single listing of priority forest policy issues for the country as a whole. However, Ross’ four categories do appear to cover most current issues and will therefore be used in this thesis.

It can be seen from Table 2 in Annex 5.2 that the two most frequently identified problems in interviews (“forest planning does not take other values sufficiently into account” and “lack of protected areas”) both fall into the “Where to log” category, which is identified by Ross as having generated the most controversy. It should also be noted that the interviews show divergent views among actors on the importance of most problems. In the case of the two most frequently identified problems mentioned above, neither was referred to by any private sector respondent and protected areas were not named by any government respondents. In general, federal government, provincial government and private sector respondents identified few problems (23 in total) whereas NGOs alone presented 49. This is consistent with the analysis in the previous section, which suggested that NGOs are beginning to emerge as an influential and critical actor in forest policy domains traditionally dominated by a clientelistic arrangement between provincial

forest ministries and the forest industry. It is not surprising in these circumstances that it is the NGOs who are most critical of the *status quo*.

Section 5.1 concluded that certification had emerged in a changing context for forestry in Canada. Having reviewed the structure of the Canadian forest policy domains and described the current policy issues we can now turn to the development of a forest certification programme in Canada.

5.5 THE DEVELOPMENT OF A FOREST CERTIFICATION PROGRAMME IN CANADA FROM 1993 TO 1997

5.5.1 Chronology of Events

The information from interviews and the literature on certification in Canada indicates the following chronology for the development of the Canadian Standards Association (CSA) certification system.

The development of the CSA forest certification programme can be divided into the phases of the “textbook policy cycle”: problem identification, agenda setting, programme development and programme implementation. Problem identification occurred from the late 1980s to the early 1990s. Agenda setting takes place when an issue reaches the political agenda and the specific mention of certification in the 1992 National Forest Strategy shows that this was occurring in the national forest policy domain at that time. There was no discernible activity in provincial forest policy domains on certification at the time, probably because the idea was too new and also because of a recognition that, on this issue, a national approach was required, rather than different certification schemes in different provinces. Programme development began in 1994 and ended in 1996. Although no forests had been certified in Canada under the Canadian Standards Association system by summer 1998 when research for this thesis was completed, several companies had begun to prepare for certification, so it is reasonable to place the beginning of the programme implementation phase in 1997.

5.5.2 Agenda Setting

The agenda setting period in Canada can be situated between 1992 and 1994. The references to certification in the National Forest Strategy are to be found under “Strategic Direction Four: Economic Opportunities: A Changing Framework” with the objective “To diversify and encourage economic opportunities for the forest sector in domestic and international markets” (NFSC 1997: 6).

The two commitments in the strategy on certification were:

4.12 Industry and governments will work cooperatively to pursue joint technical discussions aimed at internationalizing product standards, codes and certification procedures.

4.13 By 1995, industry and governments will develop and put into operation a means of identifying and promoting Canadian forest products that reflect our commitment to sustainable forests and environmentally sound technologies (NFSC 1997: 4-22, 4-24).

Several observations can be made about the way forest certification was presented in the National Forest Strategy. First, certification is clearly described as a marketing tool to promote Canadian exports, rather than as a tool to improve forest management. Interestingly, there is no mention of certification under the sections of the Strategy that refer to the forest environment, forest management practices or public participation. Second, certification in Canada originated with industry and government, and the wording of Commitments 4.12 and 4.13 show that the intention was for them to develop the programme. There was no mention of NGOs. Despite the fact that strategic direction seven of the strategy was aimed at increasing participation by Aboriginal people in forest management, their involvement in the development of a certification programme is not mentioned either. Clearly certification was a tool intended to be developed and used by the dominant coalition in Canadian forest policy domains. Third, Commitment 4.13,

with its reference to a “means of identifying and promoting Canadian forest products” seems to imply that product labelling would be part of the programme. Finally, the implication of Commitment 4.12 is that there would be an effort to gain international acceptance and recognition of the Canadian programme once it was developed.

It should also be noted that the National Forest Strategy itself was related to a broader initiative taken by the federal Canadian Forest Service (then called Forestry Canada): the International Image Programme. This programme was established in 1991 to monitor and respond to criticisms of the Canadian forest products industry, particularly in Europe. One of the activities of this programme was to provide material for use in the European markets. It has also been suggested by some analysts that the Canada Forest Accord, the National Forest Strategy and Canadian work in support for a global forest convention and criteria and indicators for sustainable forest management were part of a coherent strategy under the International Image Programme led by Forestry Canada. This strategy was aimed at responding to international (and to a lesser extent, domestic) criticisms of Canadian forest practices (Stanbury *et al.* 1994).

Whether or not all these activities were carefully coordinated, it is clear that certification in Canada was seen by both industry and government as part of a package of measures largely designed to respond to criticisms of Canadian forestry practices in the European market. Although these criticisms were emanating from NGOs, and although one of the priorities of the National Forest Strategy was “Public participation: Expanding the Dialog”, the original intention was not to develop the certification programme in collaboration with NGOs.

After the publication of the National Forest Strategy in March 1992, work on the development of the certification programme did not begin until July 1994. Several reasons can be advanced for this delay. Officials from Forestry Canada were busy at the time with UNCED and initiation of the C\$100 million “Model Forests Program”

(Forestry Canada 1991), shortly followed by the initiation of the Montreal Process for the development of criteria and indicators for the sustainable management of temperate and boreal forests. Meanwhile, with the election of a Liberal government in Ottawa in 1993 severe budget cuts were imposed on most government departments including forestry. At the same time, the Uruguay Round of negotiations of the General Agreement on Tariffs and Trade was drawing to an end (see Chapter 3, Section 3.3) and it may have become clear to federal government officials that a government-led certification scheme could be challenged under the new World Trade Organization disciplines.

Initially, the lack of activity by Forestry Canada on certification was not compensated by industry initiatives. In July 1992, after extensive consultations in the industry the Forest Sector Advisory Council (an advisory council made up of industry and academics) made the following assessment of the situation facing Canadian forest product exports.

As an industry that exports more than half of its production, secure foreign market access is vital to economic prosperity. (In many critical sub-sectors such as newsprint and lumber, exports account for 70-90% of production.) Unfortunately, today industry is faced with uncertain access to its most important markets, particularly the United States and Europe. Canada is now confronted with specific actions such as US countervailing duty measures³⁷ imposed on its softwood lumber, US-state recycle content laws in respect of newsprint, and impending environmental requirements imposed by both customers and foreign governments (e.g., eco-labelling, controversy associated with chlorine in bleaching, negative perceptions of Canadian forest management practices) (FSAC 1992: 17).

The Forest Sector Advisory Council (FSAC) report did not mention certification as a potential solution to these problems, focussing rather on the need for trade laws to prevail over

protectionist actions. The promotion of international environmental standards based on scientific principles to avoid "ill-conceived" trade sanctions, was however mentioned.

It is surprising that certification, which was specifically addressed in the National Forest Strategy published in March 1992, was not even mentioned in the FSAC report issued four months later. This suggests that at the time Forestry Canada was more interested in certification than the industry was. This attitude is understandable in light of Canadian industry concerns about disputes with the USA, its major market. In this market it appeared that certification would probably not be a useful tool because of lower levels of environmental awareness than in Europe and because the issues at hand related to alleged subsidies not environmental performance. It should also be noted that the industry was facing unfavourable market conditions, particularly for pulp and paper, with declining sales and earnings at the time and may have felt unable to make the necessary investments to develop a certification system (PPI 1992).

In 1993, the Canadian industry and the federal government invested significant resources in negotiations with the USA over softwood lumber exports. By the end of 1994 a five-year softwood lumber agreement had been reached (CFS 1995: 5). At the same time, prices began to recover, and shipments of pulp and paper rose 9.3% between 1993 and 1994 while production of lumber and panels increased 3.4% (CFS 1995: 5).

At the conclusion of the year the industry had resolved the dispute with its major trading partner and was beginning to face more favourable economic circumstances. Meanwhile, as shown in the chronology above (Table 5.3), environmental

³⁷ There have been long-standing disputes between Canada and the USA about Canadian softwood lumber exports. The US has periodically imposed duties on such exports arguing that various aspects of the Canadian forest management regime, such as tenure arrangements, constitute disguised subsidies. In 1994 after extensive negotiations involving government and industry in both countries, a softwood lumber agreement was reached under which quotas were set for lumber exports to the US from British Columbia, Quebec, Alberta and Ontario for five years (CFS 1995; NFSC 1997: 4-21).

Table 5.3 Chronology of the Main Events in the Development of Certification in Canada

Year	National events	International events relevant for the development of certification in Canada
1987	National Forest Strategy 1987-1992 adopted, emphasising economic development.	
1990	<i>Canada's Green Plan for a Healthy Environment</i> published by federal government. The plan stresses the importance of forest conservation.	Some European NGOs in collaboration with Greenpeace. Canada start calling for boycotts of Canadian forest products because of clearcuts and use of chlorine for bleaching.
1991	Canadian Council of Forest Ministers (CCFM) initiates national consultations on a new National Forest Strategy. Forestry Canada initiates "International Image Program" to improve the image of Canadian forestry overseas.	Prominent Canadian environmentalist David Suzuki appears on German TV show, in which Canada is called "Brazil of the North". Numerous NGO calls for boycotts of Canadian timber and pulp based on problems in British Columbia.
1992	<i>Canada Forests Accord</i> signed. National Forests Strategy 1992-1997 adopted, emphasising the need to sustain multiple benefits from forests and address the concerns of various stakeholder groups.	British Columbia Premier Mike Harcourt tours Europe to try to prevent a boycott. UNCED-global approach to forests taken in "Forest Principles". Canadian Pulp and Paper Association (CPPA) establishes an office in Brussels, staffed by a former Canadian diplomat. WWF International publishes <i>Forests in Trouble</i> , a critical review of the conservation status of temperate forests. Taiga Rescue Network, an international NGO network lobbying for boreal forest protection, established in Sweden.
1993	800 protesters arrested after trying to block logging operations in Clayoquot Sound. Canadian Pulp and Paper Association announces its intention to promote the development of forest certification under the auspices of the Canadian Standards Association (October).	Conference on Security and Cooperation in Europe (CSCE) seminar on sustainable development of temperate and boreal forests held in Montreal. Helsinki Ministerial conference on the protection of forests in Europe. FSC Founding Assembly in Toronto (October). Leading German publishers sign a "letter of intent" criticising clearcuts and saying that they will ask their suppliers to make environmental improvements in forestry.

Table 5.3 *Continued*

Year	National events	International events relevant for the development of certification in Canada
1994	<p>Canadian Sustainable Forestry Certification Coalition (23 national and provincial forest industry associations) formed to promote forest certification.</p> <p>First meeting of the CSA Sustainable Forest Management technical committee (July) Preliminary FSC certification assessment carried out by Scientific Certification Systems for a forest owned by J.D. Irving in New Brunswick.</p>	<p>First meeting of the Montreal Process for the development of criteria and indicators for temperate and boreal forests.</p> <p>Scott paper and Kimberley Clark cancel pulp orders from MacMillan Bloedel under pressure from Greenpeace.</p>
1995	<p>Canadian Criteria and Indicators for sustainable forest management based on Montreal process, approved by Canadian Council of Forest Ministers.</p> <p>Greenpeace statement signed by 52 NGO and First Nations representatives criticising CSA certification project and calling for its abandonment.</p>	<p>FSC accredits first four certifiers.</p>
1996	<p>FSC Canadian Working Group established (January)</p> <p>CSA Sustainable Forest Management registration standard published (October) after unanimous positive vote by technical committee.</p>	<p>FSC Swedish working group established.</p>
1997	<p>Canadian Institute of Foresters conference on criteria and indicators and certification.</p> <p>Canadian Pulp and Paper Association launches a labelling scheme that can be used to label pulp or paper from certified, or non-certified, sources.</p> <p>SCS approves J.D. Irving forest for certification under FSC system. Company decides not to make any public announcement yet.</p> <p>BC government, unions and industry announce "Jobs and Timber" accord under which industry commits to create 40 000 direct and indirect jobs in forest sector over four years.</p>	<p>Swedish FSC standard approved by national working group.</p> <p>B&Q (UK retailer) announces cancellation of hemlock purchases from MacMillan Bloedel and other BC companies because of lack of progress on certification and environmental improvement.</p>
1998 ³⁸	<p>No forests yet registered under CSA system but according to the Canadian Sustainable Forestry Certification Coalition, 15 companies are testing the standards and conducting internal audits with a view to certification</p>	

Sources: Interviews; Stanbury *et al.* (1994); Armson (1996); Elliott and Hackman 1996; CSFCC (1997a); *Globe and Mail* (1997b); NFSC (1997)

³⁸ By the end of 2000, most of these 15 companies had obtained certification. Most of them were certified under the ISO 14001 standard. Several combined ISO 14001 and CSA, and a few used FSC alone or combined with ISO 14001

pressures were mounting in European markets. An additional factor that catalysed the development of forest certification in Canada was the founding assembly of the Forest Stewardship Council (FSC), which was held in Toronto in October 1993. The creation of the FSC raised the possibility of an NGO-led certification initiative that was undoubtedly a cause for concern to the industry, in view of the conflicts it was facing in Europe.

The Canadian Pulp and Paper Association (CPPA) reacted swiftly to the situation and issued a press release at the time of the FSC meeting, announcing the creation of a Canadian forest certification initiative under the auspices of the Canadian Standards Association. In early 1994, the CPPA created a separate association, the Canadian Sustainable Forestry Certification Coalition (CSFCC), which brought together 23 provincial and regional forest products associations to promote forest certification (CSFCC 1997). It is not entirely clear why a nominally independent coalition was formed (which was actually staffed by CPPA officials and housed in the CPPA offices in Montreal). The most likely explanation is that anticipating that certification was going to be a controversial issue, CPPA wanted to avoid appearing to be directly involved. There may have also been differences in the CPPA membership about certification.

Box 5.4 Organisations Involved in the Development of the Canadian Certification System

1. Standards Council of Canada (SCC)
The governmental agency that coordinates the national standards system and represents Canada in the International Organization for Standardization (ISO). SCC also accredits certification bodies in Canada.
2. Canadian Standards Association (CSA)
A non-profit standardisation body, which has developed over 2000 standards since 1919. Operates under the authority of SCC.
3. Canadian Sustainable Forestry Certification Coalition (CSFCC)
A group of 23 provincial and regional industry associations set up to promote forest certification in Canada.

Source: CSFCC (1997)

Early in 1994, CPPA reached an agreement with the Canadian Standards Association (CSA) for the latter to create a technical committee to develop a forest certification standard, funded by CPPA (von Mirbach 1997; Griss 1998). This marked the beginning of the programme development phase. It has been estimated that CPPA provided C\$1.5 million to CSA for this task (TTJ 1995).

5.5.3 Programme Development

Early in July 1994, the CSA organised the first meeting of the CSA Sustainable Forest Management Technical Committee (referred to below as the TC). The TC was chaired by Jacques Mercier, former Dean of the Forestry Department at Laval University in Quebec. The work of the TC was guided by detailed terms of reference (CSA 1994a, Appendix 3), which provided for a membership of 24 to 32 individuals, 6-8 coming from each of the following categories: producer and general interest; environmental and general interest; professionals, academia and practitioners; and government/regulatory authority. In an additional effort to maintain balance, the terms of reference state that the number of voting members in any category may not be more than the combined number of members in the two smallest categories. In principle, this balanced membership represented a change in approach from what was planned in the National Forest Strategy where the certification programme was to be developed by government and industry. However, as discussed below, this balance was more apparent than real.

During the course of its work, the TC created three task forces of committee members: one to consider the links between the standard and legislation, one to organise pilot testing of the standard and one to consider issues relating to First Nations (aboriginal people). These task forces met from time to time, and reported back to the TC. In addition to the task forces, an editing committee was established with representatives from the following groups: federal government (3); private sector (2); provincial government (1); academics (1); and

First Nations (1). This committee was formally established at the first TC meeting but had in fact been constituted by CSA before the meeting, and had already prepared a draft of the standard which was discussed at the first TC meeting (CSA 1994a). This editing committee met regularly between TC meetings to prepare revised drafts of the standard.

At their first meeting, the TC members thus found themselves working within a pre-established framework with two main components: a systems standard, which would be compatible with the ISO 14001 standard on Environmental Management Systems; and the intention to submit the Canadian standard to the International Organization for Standardization (ISO) as the basis for developing an international standard on forest management. The decision to use a systems rather than a performance approach to forest certification was never questioned or even discussed in the TC, although the inclusion of performance components was occasionally suggested. It was however given as a reason by WWF Canada for refusing to join the TC.³⁹ Because a systems approach was used, CSA regulations required that the term “registration” be used instead of “certification” in the final standard,⁴⁰ although the Canadian industry prefers to use the term “certification” (CSFCC 1997).

The TC held nine meetings between July 1994 and May 1996. In late 1995, public consultation sessions were held in Toronto, Montreal and Vancouver, in which approximately 500 individuals participated, including 80 NGO representatives. In March 1996, the standard was tested in internal audits in six companies (CSA 1995b). Subsequently, there was a postal ballot of the TC members on the standard that resulted in a unanimous positive vote by 15 July 1996. After approval by the Standards Council of Canada, the standard was formally published in October 1996 in the form of two documents: *CAN/CSA-Z808-96 A Sustainable Forest Management System: Guidance Document*; and *CAN/CSA-Z809 A Sustainable Forest Management System: Specifications Document*. (These are referred to respectively as Z808 and

Z809.) The programme development phase can be considered to have ended by October 1996 with the publication of these documents.

The issue of “participation” featured prominently in the discussions of the TC, and in NGO criticisms of the CSA process. Two separate issues can be identified: participation of actors in the TC itself; and public participation in the registration of a defined forest area. These issues are interesting from both an empirical and a theoretical perspective. It will be recalled from Section 5.5.2 on agenda setting, that when certification was first mentioned in the National Forest Strategy in 1992, the intention was for industry and government to work together on developing the system. No other actors were mentioned. Why, then, did this change?

Two reasons can be advanced to explain the involvement of other actors in the development of the CSA standard. The first is that CSA, as a national standards-writing body, was required to follow ISO procedures concerning participation in standards development.⁴¹ The second is that CPPA and CSA probably realised the need for broader participation than just the forest industry, for credibility. The TC thus was established in a way intended to secure a balanced representation of the actors involved in the Canadian forest policy domain. At first sight, this balance was achieved and CSA has claimed that the TC “represents a balanced matrix of all stakeholders” (CSA 1995a: 1). However, examination of the attendance lists of the meetings of the TC suggests otherwise (see Table 5.4).

³⁹ Letter from M. Hummel (President, WWF-Canada) to Mr Ahmad Hussein (Secretary, CSA TC) re Technical Committee on Sustainable Forest Management, dated 4 October 1994.

⁴⁰ According to CSA regulations “registration” refers to a management system whereas “certification” refers to a product (CSA 1995b).

⁴¹ The ISO (1994) *Guide of Good Practice for Standardization* (Guide 59, Clause 6.1) requires that “participation in standardization processes, at all levels, shall be accessible to materially and directly interested persons and organizations within a coherent process”.

Table 5.4 Participants in CSA Sustainable Forest Management Technical Committee Meetings Classified by Category

Date	Producers	Academics	Environmental and general interest	Government	Total
July 1994	8	3	5	10	26
August 1994	9	3	4	11	27
October 1994	10	3	7	5	25
January 1995	11	3	7	6	27
March 1995	10	2	4	5	21
April 1995	8	3	6	5	22
July 1995	8	2	5	6	21
December 1995	8	2	7	4	21
May 1996	9	3	9	6	27
<i>Average</i>	9	3	6	6	24

Source: Minutes of CSA Sustainable Forest Management Technical Committee meetings (CSA 1994a,b, 1995b,c,d,f)

NGO participation in the TC was more apparent than real for several reasons. First, although the chief executives of two of the major Canadian NGOs working on national forest policy issues (Monte Hummel of WWF Canada and Elizabeth May of Sierra Club of Canada) were listed as members of the technical committee (CSA 1994a, Appendix 2), neither had agreed to this. In the end, neither participated in any meetings of the TC, partly because they both felt that their names had been misused to give credibility to the TC, and partly because they were not convinced of the usefulness of the exercise (M. Hummel, personal communication, August 1995; E. May, personal communication, August 1995).

Second, the NGO category of membership was actually characterised as “Environmental and General Interest” and at various meetings included a diverse range of representatives. For example the five participants listed in the NGO category at the first meeting on July 15, 1994 were:

- Greg Filyk, Environmental NGO
- Paul Griss, Environmental Consultant
- Peggy Smith, Aboriginal representative
- James Sullivan, Social/Environmental NGO
- Warren Ulley, Union Representative.

Only two of these could really be considered to represent environmental NGOs, and the union representative could actually be expected to oppose NGO views on many issues. The minutes of the TC meetings showed that the CSA was criticised for the lack of NGO participation by various members of the working group. CSA made efforts to increase NGO participation, but faced with NGO suspicion of what appeared to them as an industry-led process, and lack of NGO time and resources, this was not successful (Burrell 1997). CSA adopted two approaches to this problem. The first was to broaden the definition of the NGO category. Thus in April 1995, CSA issued a document describing the membership of the TC as:

At present, the existing SFM Technical Committee (TC) comprises 30 voting members and 20 associate members and observers. The TC has 8 members from Industry and 6 from Regulatory Authorities. All other voting members (16) represent Non Governmental Groups (NGOs). Out of the 16 NGO members, 5 are from universities, 2 from professional associations, 4 from environmental groups, 1 representing social issues, 2 representing unions, 1 representing aboriginal people and 1 representing consumers (CSA 1995a: 1)

This new definition of NGOs amounted to a merger of the two previously separate categories of “Environmental and General Interest” and “Academics and Professionals”. The ironical result of this change was that the TC was in violation of the article on “balance” in its terms of reference which required that the number of members in any category should not be more than the combined number of voting members in the two smallest categories. This appears to have passed unnoticed. The second approach taken by CSA was to organise three “public consultation meetings” in late 1995, where the draft standards were presented and public input sought.

While the TC was not successful in obtaining enough NGO participation to give it credibility with environmental NGOs in Canada, the situation was different with three other actors. From the first meeting a representative of the private woodlots associations expressed concern that the proposed standard would discriminate against its members. In response to this concern, the TC set up a task force on this issue. In the standard the concerns of woodlot owners were accommodated in two ways, which were apparently satisfactory to them. First, the “defined forest area” to be certified could include several woodlots, thus allowing for “group certification”. Second, private forest owners were effectively given a veto over the public participation process concerning their lands (CSA 1996a: 14, 17).

In response to requests by the First Nations representative for special mention of Aboriginal rights in the standard a section was added which referred to the unique legal status of Aboriginal peoples and opened the possibility for a separate consultation process with them (CSA 1996b: 15-16). A general mention was also made of aboriginal treaty rights. These elements satisfied the National Aboriginal Forestry Association representative in the TC (CSA 1995d) but were subsequently criticised by other First Nations groups (CEN 1996).

The compatibility of the standard with provincial legislation and regulations was often a contentious issue in the TC. The final decision was that in the event of a contradiction between legal requirements and the objectives identified in the public consultation process, the former would prevail. This is a significant point because forest

tenures in Canada usually constitute a right **and an obligation** to harvest a certain amount of timber from a given area, within an agreed time frame (Ross 1995: 147). If this volume is not harvested, fines can be levied on the licence holder. It is quite likely that public consultations would lead to recommendations that certain areas be protected from harvesting (with a consequent reduction in harvesting levels). However, with this decision of the TC, these could prove difficult to implement.

Turning now to the second issue of participation in registration, three points can be noted. First that the procedures for public consultation in establishing the SFM performance framework are extensive and detailed. Their development in various drafts of the standard is quite remarkable. Public participation was not even mentioned in the draft circulated in August 1994 (CSA 1994b: 3), by August 1995 there was a section on the topic but it was noted that “It must be clear to all participants from the beginning that the final decision rests with the forest manager or owner” (CSA 1995e: 24). The final version of the standard does not give any such veto power to forest managers (although woodlot owners still retain this right). The public participation provisions were frequently referred to by TC members, interviewed in research for this thesis, as a reason for their having voted in favour of the standard.

The second point to note about public participation is that it only applies to the development of the performance framework. The implementation of the system (through management planning, measurement and assessment and review and improvement) does not include any reference to public participation, nor are certifiers required to consult the public during the registration process (CSA 1996b). This may diminish both the credibility and the effectiveness of the system, as the local stakeholders, having gone through a detailed public consultation process, would presumably expect to continue to be involved in the implementation of the performance framework which they helped shape.

Finally, the standard is not explicit on how decisions will be made in the public participation process in the absence of consensus. This has been criticised by Canadian NGOs who have argued that such decisions will *de facto* be made by the forest

manager in the absence of clear decision-making procedures.⁴²

These three points, together with the pre-eminence of legal and regulatory requirements over the objectives that may emerge from a public consultation process, are liable to limit the impacts of the provisions in the standards for public consultation.

5.5.4 The Canadian Standards Association Sustainable Forest Management Standard

5.5.4.1 Overview of the Standard

The CSA standard is based on the framework provided by the ISO 14001 Environmental Management Systems standard. Three main elements have been added: the Canadian Council of Forest Ministers Criteria and Indicators for Sustainable Forest Management, the public participation process and the word “sustainable” in the title.

The preamble to the standard clearly situates it in the context of UNCED, Canada’s forest product export trade and the National Forest Strategy. The standard is presented as a means for the private sector to translate the Canadian Council of Forest Minister’s Criteria and Indicators for sustainable forest management into action on the ground in the absence of an internationally accepted standard for sustainable forest management (CSA 1996a: xi). The objectives are described as:

A registered SFM system is designed to:

- instill a much broader practice of sustainable forest management;
- provide information on forest activities and their effectiveness in achieving sustainable forest management;
- ensure conditions that allow for the setting of new, environmentally, socially and economically sensitive forest practices as part of the management system; and
- allow registrants to demonstrate their commitment to sustainable forest management (CSA 1996a: xiv).

In view of the fact that it is the forest company or forest owner’s forest management system that is certified, the use of the passive voice in these objectives is surprising. For example concerning the second objective it is not clear who will provide information on what, to whom. This use of the passive voice has been criticised by Canadian NGOs on the basis that it obscures the decision-making process in forest registration.⁴³

The standard can be used for certification of a specific area of forest land, which may be owned or managed under a variety of arrangements. Irrespective of these arrangements, it is this “defined forest area” that is the subject of certification.

The CSA standard consists of two components, which are described as “performance” and “systems” frameworks. The performance framework begins with the Canadian Council of Forest Ministers Criteria and Indicators for sustainable forest management.⁴⁴ The standard requires that the manager (or managers) of the defined forest area carries out a public consultation exercise with local stakeholders to determine a set of values, goals, indicators and objectives for each criterion. (See Box 5.5 for a hypothetical example.)

⁴² For example, in a letter to the Vice President of CSA, Pat Paladino, dated 15 March 1996, 43 NGO and First Nations representatives of the CEN wrote: “Stripped of rhetoric, the Z800 document bestows decision-making authority on the forest owner or manager on a wide variety of issues. This authority is essentially unilateral and extends to: defining the forest area to which the system applies, identifying the values to be managed, defining the goals, choosing the indicators and developing a forest plan. Z800 masks this significant fact skillfully. Its authors have written all of these points in a passive voice”.

⁴³ Letter to the Vice President of CSA, Pat Paladino, dated 15 March 1996, from 43 NGO and First Nations representatives of the CEN.

⁴⁴ The criteria are: conservation of biological diversity, maintenance and enhancement of forest ecosystem condition and productivity, conservation of soil and water resources, forest ecosystem contributions to global ecological cycles, multiple benefits to society and accepting society’s responsibility for sustainable development (CSA 1996a: 9-11).

Box 5.5 An Example of the CSA Sustainable Forest Management Performance Framework

Elements in the Standard

CCFM SFM Criterion 1: *Conservation of biological diversity*
CCFM Critical Element 1.2: *Species diversity*

Elements to be Developed at the Level of the Defined Forest Area

Local Value: *A healthy population of woodpeckers*
Goal: *Increase the necessary habitat for woodpeckers*
Indicator: *Actual increase in relevant habitat-standing dead tree*

Source: CSFCC (1996)

Although the standard calls for decisions in the public consultation process to reflect a balance of views and interests, it is not specified how these decisions will be reached, a point which has been criticised by Canadian NGOs.⁴⁵

The systems framework starts with the identification of values, goals, indicators and objectives. On the basis of these and a review of the relevant legislation and regulations, a management plan is prepared by the forest manager. The other systems components are the implementation, measurement and assessment, and review and improvement of the plan.

Registration of a defined forest area involves an independent certifier checking that the public participation process was conducted according to the standard, and the system elements are in place and operating. The standard does not allow for product labelling because no procedure for chain-of-custody is included.

5.5.4.2 International Linkages

It was clear from the beginning of the work of the TC that the intention was to develop a standard that would be submitted to International Organization for Standardization (ISO) as the basis for developing an international forest certification standard. The link to ISO was explicitly made by Mr Hussein the secretary of the TC, in his opening comments at the first meeting, and is compatible with Objective 4.12 of the National Forest Strategy which referred to

internationalising product standards, codes and certification procedures (CSA 1994a).

This link to ISO together with the adoption of a management systems approach to certification were “givens”, which were presented to the TC at its first meeting. The use of the systems approach was accepted by the TC members without discussion. However, the linkage between the Canadian standard and ISO was more controversial,⁴⁶ both within the TC and ISO itself, and was ultimately not achieved.

In May 1995, CSA proposed to the International Standards Organization Technical Committee on Environmental Management (ISO TC207), that ISO begin work on a standard for the forest industry to be titled “Guide to the Application of ISO 14001 in the Forestry Sector for Sustainable Forest Management”. It was implicit in this proposal that the draft CSA standard would be used as the basis for this guide, as it is normal procedure in ISO work for international standards to draw on documents prepared by national standards bodies (CSA 1994b). A six-month postal ballot of TC 207 members was organised to decide this issue. It should be noted that CSA was in a strong position to promote this proposal as a CSA representative occupied the post of secretary of TC 207, while TC207 was chaired by a representative from the Standards Council of Canada.

The CSA proposal rapidly became controversial on two fronts. International NGOs led by WWF and Greenpeace criticised it on the grounds that a systems approach to certification

⁴⁵ Letter to the Vice President of CSA, Pat Paladino, dated 15 March 1996, from 43 NGO and First Nations representatives of the CEN.

⁴⁶ For example Paul Griss, an environmental consultant in the TC, wrote to the Chair of the TC, Jacques Mercier, on 10 March 1995 stating that “The SFM TC has been told from the outset that the members are in charge and call the shots. This is simply not the case. It is readily apparent that Z808 and Z809 will be released for public consultation, put to a vote and a seed document submitted to ISO at the appointed dates. Any interventions that could slow the process or detract from this objective, run headlong into the terms of reference of CSA’s contract with CPPA and the associated budget constraints”.

was insufficient to guarantee sustainable forest management. They particularly objected to language in the proposal that suggested ISO should only recognise forest certification based on a systems approach and not consider performance standards, which they interpreted as an attack on the Forest Stewardship Council (FSC).⁴⁷ They also challenged ISO's legitimacy to develop a standard on forest management, claiming that the membership of TC207 was not representative (WWF 1995).

Meanwhile, industry representatives from other sectors, particularly in the USA, opposed the proposal on the grounds that the development of sector-specific standards would weaken the generic ISO 14001 standard (IES 1995a). In view of this opposition, the Canadian proposal was withdrawn at the TC207 annual meeting in Oslo in July 1995. Eventually, a working group was set up by TC207 to produce a report on the ways in which ISO 14001 could be used by forestry organisations.

This represented a setback for the efforts of the Canadian industry and government to internationalise the Canadian certification system. The dispute in TC207 was particularly difficult for the Canadian industry because it found itself in opposition to forest and other industry representatives from its major export market, the USA. At the Oslo meeting, Gerard Lapointe a Canadian Pulp and Paper Association representative, perhaps speaking in frustration, was quoted as saying that if TC 207 were to reject the Canadian proposal, CSA was prepared to publish and implement the Canadian standard independently in late 1995 (IES 1995b: 1). This statement is surprising in two ways. First, the standard was still in draft form at that time and the pilot tests and public consultations would not be completed in time to allow publication of the standard in 1995. Second, neither CPPA nor the Sustainable Forestry Certification Coalition were members of the CSA TC. However Lapointe, as a CPPA representative, was apparently speaking on behalf of CSA. This casts some doubt on how independent from the industry the TC, and CSA itself, actually were.

The failure of the CSA to get the proposal adopted in Oslo may be explained by three factors.

First, CSA probably underestimated the level of coordination between Canadian NGOs and international NGOs, such as WWF and Greenpeace, and was not prepared for these organisations to appear in Oslo with observer status, mounting an aggressive campaign against the proposal, which they saw as a direct attack on FSC. In seeking international recognition for the CSA standard, while also appearing to try to undermine FSC, the CSA and the Canadian forest industry may have been overambitious.

Second, CSA appears to have underestimated the opposition in ISO to the development of sector-specific standards within the ISO 14001 framework. Third, although the Australian national standards body supported the Canadian proposal CSA was unable to obtain any significant support from other countries. Either the forestry industry in other countries opposed certification (as in the USA), was more interested in FSC (as in Sweden) or even if they did support the idea of an ISO standards, they may have felt that what was being proposed was "too Canadian" and would not suit their national circumstances.

The debate in ISO on the Canadian proposal is interesting from a theoretical point of view because ISO and its member bodies can be viewed as an epistemic community of technical experts on certification. These experts view the firm as a learning organisation with a commitment to continual improvement, whether in quality or environmental management, and see the use of management systems standards as a way of facilitating this (Clancy and Sandberg 1998). However ISO's decision to develop standards for environmental management (the ISO 14000 series) has attracted other actors, such as NGOs, who are not part of this epistemic community to ISO meetings. As the example of the CSA

⁴⁷The proposal (ISO 1995b: 2) noted that: "A voluntary certification system will help ensure sound forest management and promote trade. Some certification initiatives underway are based on an EMS approach, while others follow a product labelling approach. These different approaches may create confusion in the marketplace. There is a clear need for one internationally recognised and equivalent system. ISO fills these requirements and the EMS approach under 14001 offers a valuable framework for sustainable forestry certification".

proposal shows, this has led to conflict both between the new actors and members of the epistemic community, and between members of the community itself. It would be fruitful to carry out a detailed study on ISO from an epistemic community perspective to see how such communities adapt to changing circumstances.

5.5.4.3 Sustainability and Management Systems Standards

At first sight there is an internal contradiction in the title of the standard between the word “sustainable” and the words “management system” because the former implies a specific level of performance whereas one of the principles of the latter is that companies to be certified or registered can set their own level of performance. Indeed, the word “sustainable” has been the subject of strong NGO criticism of the standard (WWF 1995; CEN 1997).⁴⁸ This issue was the subject of many discussions in the TC and as late as the penultimate meeting in December 1995, Gordon Baskerville, one of the academic representatives noted that:

all claims to sustainability are suspect since we do not know or cannot predict the future; such claims would only be a hypothesis. To determine if a forest is sustainable would involve a 100 year time horizon (CSA 1995f: 9).

While maintaining the word sustainable in the title, the TC addressed this issue in several ways. First, the objectives of a registered SFM system which originally included:

enable clients to identify forest products originating from forests managed according to the principles of sustainable forest management (CSA 1995e: i).

became:

allow registrants to demonstrate their commitment to sustainable forest management (CSA 1996a: xiv).

This change eliminated the possibility of product labelling (which technically was not possible anyway with the system, in the absence of chain-of-custody mechanisms). It also meant that registration of a defined forest area was supposed to be interpreted as a sign of the commitment of the manager to sustainable forest management, rather than the attainment of it.

The second way in which the issue was addressed is more perplexing. The Standard notes that:

Sustainable forest management recognizes that forest ecosystems change continually as a result of both human activities and natural processes. Whether any forest value is sustained lies in the pattern of conditions that develop in the forests over time. Actions taken or not taken by a registration applicant influence these patterns or conditions as they evolve. It is these patterns, not the actions, that are the basis of sustainable forest management or the lack thereof (CSA 1996a: 5).

It is understandable that reference is made to the natural dynamics of forest ecosystems in a country such as Canada where widespread natural disturbances are frequent. However, these sentences appear to separate managerial interventions from their impacts on the ground, neglecting the fact that it is the management system (not the status of forests on the ground) which is the object of the certification or registration.

Sustainability was also addressed through the “performance framework”, based on the Canadian Council of Forest Ministers Criteria and Indicators for Sustainable Forest Management. However, these criteria and indicators do not in themselves constitute performance levels. They could be a basis for developing such standards through public consultations.

⁴⁸ The ISO standard on which the CSA one is based is entitled “Environmental Management System” rather than “Sustainable Environmental Management System”, a point that has been underlined by critics of the CSA TC.

If we assume that one of the original objectives of the CSA standard was, as quoted above, to enable clients to identify forest products from sustainably managed forests, it appears surprising that the approach of a performance standard was not chosen, or at the least, some performance levels were not included in the management systems standard. Three reasons can be advanced to explain this deficiency. First, by the time the TC first met in July 1994, the Forest Stewardship Council (which was working on performance standards for forest certification) was already established. The CSA initiative developed partly as a response to FSC and, if a performance standard approach had been chosen, the Canadian standards would have been subjected to continuous comparison to those developed by the FSC. This could be expected to be more demanding in terms of environmental and social content. Second, since there was a clear intention on the part of government and industry of “internationalising” the standard, the ISO was the logical forum to do this in the absence of a Global Forest Convention. Although ISO has developed both performance and systems standards, the obvious link was with the ISO 14001 standard on environmental management systems. Third, leaving aside the technical difficulty of developing performance standards which could be used in the different Canadian forest types, provincial ministries of forestry would be unlikely to support such an initiative because they view this as their prerogative⁴⁹

From a theoretical point of view this last point is interesting because it is consistent with the ACF’s classification of “proper scope of government vs. market activity” as a component of the “near core” of belief systems, and is thus difficult to change (Sabatier 1993: 31). From an ACF perspective we could thus anticipate that provincial government officials would be unlikely to agree to one of their main activities (setting of performance standards for forestry through regulations) being taken over by a non-governmental body such as the CSA Technical Committee.

The choice of a management systems approach is also compatible with the clientelistic

structure of provincial forest policy domains in Canada. As discussed in section 5.5.1, the relations between the forest ministries and the industry they regulate are close and based on negotiation and cooperation, rather than confrontation and repression. Under these circumstances, the view of the firm as a learning organisation with a commitment to continual improvement, which is the basis of the management systems approach (Clancy and Sandberg 1998), is natural.

5.6 PROGRAMME IMPLEMENTATION

By the spring and summer of 1996, as the CSA standard was being finalised, actors in the Canadian national forest policy domain began to take public positions on the issue.

The federal and provincial governments issued a position paper in July 1996 on forest certification (GOC 1996). This paper outline a set of criteria for certification systems⁵⁰ which were similar to those outlined in International Tropical Timber Organization (ITTO) reports and the Intergovernmental Panel on Forests (IPF) and its intersessional meetings (see Chapter 3). The paper

⁴⁹ For example, Don Wright an Assistant Deputy Minister in the British Columbia Ministry of Forests was quoted in 1996 as saying that he did not want to see a certification system that might work against the policy objectives of individual governments. In relation to forest policy reform since 1993 in British Columbia, he noted: “We would be very concerned if certification tried to undo any of that, or if it led forest management in BC in a different direction from what has already been achieved at considerable cost” (CFS 1996: 65).

⁵⁰ These criteria were that certification should be: i) complementary with governmental policies; ii) able to reflect a balance of the major forest interests; iii) objective and scientifically based; iv) implementable, practical and cost-effective; v) non-duplicative of legislative and administrative requirements; vi) non-discriminatory and applicable to a broad range of private forest owners managers and operators; vii) auditable and include appropriate measurable indicators; viii) voluntary and operated independently of government; ix) based on the market’s desire and ability to pay and the forest industry’s willingness to support it; x) consistent with national and international agreements on definitions of sustainable forest management; xi) consistent with trade law and international principles; and xii) acceptable to all major consumer markets (GOC 1996).

discusses the strengths and weaknesses of both performance and systems standards for forest certification in a balanced manner, and called for “harmonisation” between these approaches without mentioning either CSA or FSC. In essence, the provincial and federal governments stated that they saw certification as a private initiative which should operate outside the framework established by governments, but be compatible with it. The National Forest Strategy and the Canadian Council of Forest Ministers Criteria and Indicators for Sustainable Management (CCFM C&I), were mentioned as providing part of this framework, together with provincial forest legislation.

This “neutral position” between CSA and FSC was subsequently maintained by Canadian representatives in the discussions on certification at the IPF. The position marked a change from that taken by the representative of the Canadian Forest Service at the ITTO meeting on certification in May 1994, where clear preference for a CSA standard within an ISO framework was expressed (Carette 1994). Two reasons can be advanced to explain this change of position. First, there had been lobbying by the FSC working group in Canada. James Sullivan, who was a member of the working group as well as of the FSC international board, had made representations to the Canadian Forest Service after the founding of the FSC working group in January 1996. He asserted that there were now two processes on forest certification in Canada, and it would be inappropriate for the federal government to choose one over the other (J. Sullivan, personal communication, March 1997). Second, the events at the ISO meeting in Oslo in July 1995 may have convinced the federal and provincial governments that the “performance vs. systems” debate was liable to be controversial and that it would be more prudent if they did not take sides in it. The position paper must have been a disappointment to CPPA and CSA, who could argue in good faith that the standard had been developed in response to the National Forest Strategy, made explicit reference to the CCRM C&I, and deferred to legislation in the eventuality of contradictory values emerging from the public participation process.

However, neither CSA nor CPPA made any public comments. The industry made its views known on the standard in October 1996 after it had been formally approved by the Standards Council of Canada. In a press release dated 29 October, the Sustainable Forestry Certification Coalition made the following points:

Canada is the first nation in the world to have a practical system for sustainable forest management.

The industry needed a certification system to demonstrate to its customers worldwide and to the Canadian public that it is increasingly managing its forests to achieve sustainability for a wide set of values.

Most companies will have to do considerable work to achieve and maintain certification and it will be sometime in 1997 before any forests are certified under the CSA system (CSFCC 1996).

The second point takes a cautious approach to sustainability and the third warns that registration (incorrectly referred to as “certification”) will take time. However, it is the first point that is the most interesting. The CSA system is presented as the property of “Canada” although by this time the forest industry was the only actor in the national forest policy domain to give it explicit public support. Also, the statement appears to neglect efforts in other countries to achieve sustainable forest management.

NGO reactions can be divided into two categories. Most Canadian NGOs rejected the standards outright.⁵¹ WWF Canada took a different approach. While remaining critical of the standard, it proposed that NGOs and industry collaborate on the development of regional performance standards for forest certification, which could be used as a bridge between the CSA

⁵¹ Letter to the Vice President of CSA, Pat Paladino, dated 15 March 1996, from 43 NGO and First Nations representatives of the CEN.

and FSC approaches (Elliott and Hackman 1996). This idea was briefly considered by some forest companies but was not accepted and by July 1997 the Sustainable Forestry Certification Coalition appeared to dismiss it (CSFCC 1997b).⁵²

There would have been good reason for the Canadian industry to support the WWF-Canada proposal because it was compatible with the federal and provincial government's call for "harmonisation" of performance and systems approaches. In addition, in May 1996 a representative of the Swedish Company AssiDomän announced that Swedish forestry companies saw no incompatibility between combining performance and system approaches through seeking both ISO 14001 and FSC certification (Johansson 1996).

The main reasons for the lack of willingness of the Canadian industry to become involved in the development of regional performance standards were probably the realisation that this could bring them into conflict with provincial governments, be divisive for the industry itself (which would have different standards in different parts of the country), and that NGOs could either control the process or at least slow things down for some time. These reasons are all understandable. What is less clear is why industry did not propose any alternative approaches to engage the critics of the CSA standard and gradually rebuild government support.

In June 1997, the CPPA adopted another initiative to compensate for the lack of product labelling in the CSA standard. CPPA launched an "Environmental Profile Data Sheet" a Type III label⁵³ for pulp and paper allegedly compatible with ISO standard 14020⁵⁴ (see Box 1.2, Chapter 1). The data sheet accompanying the label includes a question on the percentage of fibre coming from certified or registered forests, although there are no provisions for chain-of-custody checking. Thus, in theory a company could have its forests registered using the CSA standard and then label their pulp and paper (but not sawnwood) with the CPPA Type III label.

By June 1998, when research for this thesis was completed, no forests in Canada had been certified under the CSA system. However, the Sustainable Forestry Certification Coalition

reported that in 1997 at least 15 forest product companies and 12 000 private woodlot owners were in the process of testing the standards or beginning public consultations (CSFCC 1997). Meanwhile in September 1997 J.D. Irving had 190 000 ha of privately owned forest land in New Brunswick certified by Scientific Certification Systems (SCS) using the FSC Principles and Criteria. However J.D. Irving did not make a public announcement of this because of differences of views with the FSC working group that was developing regional standards for the Acadian forests. These negotiations were still under way in June 1998. Finally, in February 1998, SmartWood certified the 22 000 ha privately owned Haliburton Forest and Wildlife Reserve in Ontario (SmartWood 1998). This was the first publicly announced forest certification in Canada.

From interviews and visits to forest operations in Canada, an analysis of various recent articles and conference papers, three reasons can be suggested as to why no forest operations have been registered, two years after the CSA standard had been finalised.

First, the public participation process is proving more demanding to prepare and implement than anticipated. Not only are many companies finding that they lack the experience and skills to conduct a comprehensive public participation process, but members of the public are not always willing or able to devote the time

⁵² "At a first glance, it would seem that the performance aspects of the FSC could be combined with the management system of the CSA to produce one approach. This may not work because the CSA standard includes a requirement for local public participation in the development of SFM values, goals, objectives and indicators. It may be that the CSA public participation process will come to different conclusions about these things than will the FSC discussion processes" (CSFCC 1997b: 17).

⁵³ Type III labels are report cards with quantitative information or scores on various aspects of the life cycle of a product. They do not include performance levels, so all products in a particular category can be labelled but the differences in the scores are intended to help consumers make informed purchasing decisions.

⁵⁴ After complaints by NGOs that the label could not be compatible with a standard which had not yet been approved by ISO, the mention of ISO 14020 was dropped.

necessary to contribute (Bourgeois 1997; Griss 1998). For example, the manager of Laval University's small (6600 ha) research forest in Quebec has estimated that it will take three to five years to develop and implement a sustainable forest management system for the forest, even in a situation where there are no significant conflicts with local communities (Bélanger 1997). Weldwood of Canada is one of the few companies that has made the public commitment to have all its forest operations registered using the CSA standard. Don Laishley, Director of Forest Strategy for the company, has stated that the 1 million ha licence in Hinton, Alberta, will be the first to be registered in 1999 (Laishley cited in Griss 1998). However, the Chief Biologist of Weldwood noted in September 1997 that public consultation on the indicators was still at an early stage (Bonar 1997). Under these circumstances, registration in 1999 may be difficult to achieve.

Second, declining prices of pulp and paper⁵⁵ (average prices for Canadian pulp and paper exports declined by 37% in 1996,) have placed many companies in a less favourable economic situation than when work on the standard began in 1994 (CFS 1997: 118). Under these circumstances, the cost of certification becomes a more important issue than it might have been in the past. The CSA system may be relatively expensive, compared to a performance system, because of the public participation process (which is time consuming) and extensive documentation requirements typical of management systems (Griss 1998). There is no published information on the real costs of registration under the CSA standard and companies visited during research for this thesis stated that they considered this to be confidential information.

Third, as companies become more familiar with the standard, they may begin to question the benefits of CSA registration. The standard has two main weaknesses for a company wishing to demonstrate excellence in forest management to its clients: lack of NGO and governmental support; and lack of provision for product labelling. There has been little support for the standard from federal or provincial governments, as mentioned above. NGOs and buyers' groups in Europe have been critical of the CSA process. There appears to be

little demand for the standard in the USA, which is Canada's main export market (McCloskey 1977).

In addition, it has become clear that CSA registration does not require the certifier to assess compliance with applicable legislation on the ground (Johnson 1997). This means that in provinces such as British Columbia and Ontario, which are beginning to require so-called "compliance audits" to check that licence holders are complying with legislation and regulations, registration under the CSA standard would not obviate the need for a separate compliance audit. In British Columbia the Forest Practices Board carries out these audits (Moore 1997). Under these circumstances there must be increasing temptation in the industry to look to certification under ISO 14001, which has international recognition and which does not require a public participation process. An alternative that has been mentioned by several companies is combining CSA and FSC certification (e.g., Bourgeois 1997).

It is interesting to conclude this discussion on programme implementation with a brief comparison between the situations in New Brunswick and British Columbia. In New Brunswick, by January 1997 both the J.D. Irving company (the largest forest company in the province) and the provincial woodlot owners' association, had expressed strong interest in certification. In the case of the woodlot owners' association no clear preference was stated between CSA and FSC approaches.

Woodlot owners say it won't really matter to them who issues the green stamp of approval, but it will matter whether their forests get it because that factor will soon be the deciding factor in how well their trees will sell into the global market place (Ryan 1997).

⁵⁵ It should be noted that average lumber prices across Canada rose steadily from 1992 to 1996 (CFS 1997: 119), although they declined 40% in British Columbia in 1997 due to the financial turmoil in Asian economies (FT 1998b). The main export market for Canadian lumber is the USA, where demand for certification is low.

However, one of J.D. Irving's major clients in the USA is HomeDepot, which has been a supporter of the Forest Stewardship Council (Eisen 1997). The president of J.D. Irving was quoted as saying:

We need to get certified. From a commercial point of view and the consumer's point of view in both lumber and pulp people have been requesting it...The FSC is the only one we know which has representatives from the World Wildlife Fund and the Sierra Club. We have been told by major United States and European outlets that certification is one way to be successful. We expect to have some advancement in this area in 1997. Presently we are working with the FSC. But we'll get ourselves certified by whichever agency our customers want us to be certified by (Irving 1996).

Based on this interest of J.D. Irving in certification,⁵⁶ WWF-Canada approached the company in an effort to persuade it to make joint representations to the provincial government in favour of both certification and additional forest protected areas.⁵⁷ This initiative was not successful in WWF-Canada's view because of a lack of willingness of the company to "push" the government on either issue (A. Hackman, personal communication, May 1997).

In British Columbia, visits and interviews with industry officials in 1997 suggested that the industry was more hesitant about CSA certification, although one company (Canfor) had announced its intention to have some of its licences certified (Higginbotham 1997). Several factors seem to explain the difference to New Brunswick. First, unlike New Brunswick, British Columbia had engaged in a major series of reforms of forest policy in recent years in response to international and domestic criticism. These reforms included the establishment of an independent forest management auditing agency – the Forest Practices Board. Second, the volume-based tenure system, which predominates in British Columbia, is less favourable to

certification than the area-based tenures in New Brunswick, because the licences are shorter-term and give less responsibility to the forest manager. Third the Social Democratic government in British Columbia is generally less sympathetic to market-based instruments (like certification) than the Liberal government in New Brunswick, which supports deregulation (Milne 1996; Sigurdson 1996). Finally, in June 1997, Greenpeace appeared to be losing ground in British Columbia as the efforts of the government to divide the NGO/First Nations collaboration bore fruit. On 23 June 1997, the *Toronto Globe and Mail* published an article entitled "Greenpeace loses support for B.C. logging protests" describing conflicts between Greenpeace and local First Nations groups.

However Greenpeace responded to this situation by again internationalising the debate and lobbying buyers of British Columbian forest products to cancel orders. By May 1998, this campaign had allegedly resulted in over US\$10 million of lost business for British Columbian forest products companies (B. Barclay, personal communication, June 1998). In June 1998, three British Columbian companies (MacMillan Bloedel, International Forest Products and Western Forest Products) announced that they were planning to reduce or even end clearcut logging in old-growth forests. Western Forest Products underwent a preliminary certification assessment with an FSC-accredited certifier. MacMillan Bloedel, the largest forest products company in the province, announced that its policy was to meet the standards of all existing forest certification programmes as part of its new "Forest Project" which had been approved by the company in May 1998 (FT 1998b,c).

This project was presented by Mr Tom Stephens, President and Chief Executive of

⁵⁶ Although Irving was the most forthright in its expression of interest in certification, it appears from discussions with industry sources who do not wish to be cited, that most companies in New Brunswick were exploring the possibilities of certification by doing internal audits using the CSA standards, and in a few cases the FSC Principles and Criteria.

⁵⁷ Letter from M. Hummel (President, WWF-Canada) to Mr J.K. Irving (President, J.D. Irving) re Technical Committee on Sustainable Forest Management, dated 4 October 1994.

MacMillan Bloedel, as the result of customer pressure in Europe, although there was no doubt that other factors were involved, such as the Asian financial crisis of 1997-98 and the increased costs of logging as a result of the province's Forest Practices Code. The Forest Project was initiated in November 1997 by Mr Stephens when he joined the company. Thus followed a high profile announcement in the same month by the UK retailer B&Q that they were cancelling an order of timber from MacMillan Bloedel worth between US\$1 and 2 million as a result of lack of progress of the company towards environmental improvement in forest practices and certification under the FSC programme. The Forest Project included a comprehensive review of the company's forest policy, and recommended increased conservation of old growth forests, replacement of clearcutting and forest certification (MB 1998a).

It is interesting to note the government's role in this process, recalling that in British Columbia the majority of forests are owned by the government. As late as May 1998, the British Columbian Ministry of Forests had been trying to defuse the situation by encouraging Greenpeace and other environmental groups to join a two-year land-use planning process in the central coast region, which the NGOs had been boycotting. These efforts were unsuccessful, and MacMillan Bloedel and the other companies took the initiative to announce changes in their forestry practices, without waiting for approval from the Ministry of Forests, although MacMillan Bloedel noted that the Ministry would have the final say on approving these changes (MB 1998a). Not only did the companies not wait for Ministry of Forests approval, MacMillan Bloedel went so far as to issue a "white paper" proposing a series of reforms in forest revenue and tenure policies in the province (MB 1998b). The term "white paper" is normally reserved in Canada for official government policy proposals.

It is unclear how developments will unfold in British Columbia over the coming years, and whether these and other companies will really implement changes in their logging practices and seek FSC and or CSA certification. However, what

is clear is that CSA certification has not yet proved to be a satisfactory marketing tool for the British Columbian forest products industry to use in its efforts to satisfy environmentally concerned customers overseas. This is partly because of the three issues mentioned above, but also because the CSA system does not yet provide sufficient guarantees of environmental performance to international audiences.

On the other hand, the recent developments in British Columbia suggest that after years of acrimonious disputes, the Forestry and Environmental Coalitions may be close to reaching some common ground on the contentious issue of clearcutting in old-growth forests. If this is the case, the "where to log" issue may be partly resolved and certification could then play a useful role in addressing the "how to log" question, through the development of regional performance standards.

5.7 DISCUSSION AND CONCLUSIONS

5.7.1 Strengths and Weaknesses of Forest Certification in Canada and Recommendations for Improvement

A preliminary evaluation of the CSA programme using the same criteria as in the Indonesian case study has been carried out (Table 5.5).

We can see from this table that the CSA Sustainable Forest Management standard has a number of strengths. In addition, unlike in Indonesia or Sweden, certification in Canada was part of a broader government plan (the 1992 National Forest Strategy) for improving forest management in Canada. A range of other measures, from strengthening the national forest inventory, to completing the nation's protected area system, were included in the Strategy. This Strategy was developed with the participation of the members of the dominant Forestry Coalition, and had their support.

Turning to the certification standard itself, it is based on the internationally accepted model of the ISO 14001 standard. This provides a pre-

Table 5.5 Evaluation of the CSA SFM Certification Programme

Criterion	Comments on CSA System
Credible to consumers	The programme has three weaknesses in this respect: the absence of performance levels, a product label and the lack of NGO support.
Comprehensive to include all types of timber and timber products	The programme can include all types of timber and timber products from Canada.
Objective and measurable criteria	The criteria are relatively objective (some questions have been raised about the treatment of First Nations treaty rights), and are measurable.
Reliable in assessment results	Assessment results should be reliable
Independence from parties with vested interests	The setting of performance standards by the companies to be certified (albeit through a public participation process) and the funding of the development of the standard by the Canadian Pulp and Paper Association represent weaknesses in terms of independence.
Voluntary in participation	The use of the programme is voluntary.
Equal treatment, non-discriminatory in trade impact	The programme does not appear to discriminate between types of forest organisations within Canada. At it only applies to Canada it cannot be said to discriminate against forestry in other countries. Although provincial and federal governments were involved in developing the programme it will operate independently so it cannot be accused of constituting a trade-distorting subsidy.
Acceptable to the involved parties	Most NGOs and some First Nations groups have criticised the programme.
Institutionally adapted to local conditions	Yes, the programme was designed to take into account the fact that most forests in Canada are owned by the provinces.
Cost-effective	Too early to say, but initial indications are not positive.
Transparent to allow external judgement	The public participation process should help with transparency in setting performance standards, but there are few provisions for transparency during programme implementation.
Goal orientated and effective in reaching objectives	A lot of effort was put into making the structure of the standard goal oriented. It is too early to say whether the programme will be effective in helping forest companies reach their objectives, although this can be questioned in terms of market objectives.
Practical and operational	The public participation process may be complex to manage, and the need to document all aspects of the forest management system could lead to excessive bureaucracy in forest companies.
Applicable to all scales of operation	Yes, special efforts have been made to address the concerns of woodlot owners.

tested framework for large, vertically integrated forest companies to use in establishing forest management systems. This framework is compatible with that for quality management (i.e., the ISO 9000 series of standards), which could simplify concurrent registration or certification of forest management systems and of environmental or quality management systems.

Despite these strengths, and significant investment by the Canadian forest products industry in developing and promoting the standard, no Canadian company had been registered under it by June 1998, almost two years after the standard was finalised. In the world of international standards, this is unusual. Standards are normally used even before they are finalised. Thus, for example, the Brazilian pulp and paper company Bahia Sul had its forest operations certified under ISO 14001, while it was still a draft international standard (Cajazeira 1996), and the draft FSC standards were used for forest certification in Sweden, as discussed in Chapter 6.

As discussed in Section 5.6, several reasons can be advanced to explain lack of implementation of the standard so far, although it should be kept in mind that a number of companies are reportedly preparing to seek registration under the standard. The requirements for the public participation process are demanding, prices of forest products have been on a downward trend, and the real benefits of registration (at least in European markets) are unclear.

When the National Forest Strategy was finalised in 1992, the Environmental Coalition was just beginning to exert its influence in British Columbia. In 1998 it is still weak in New Brunswick and a number of other provinces, but it is clearly present at the national level. Thus, it can be argued that the structure of the national forest policy domain has been undergoing change while the CSA standard was being developed (Clancy and Sandberg 1998). The result is a standard that does not fully reflect the political realities of Canadian forest policy domains in 1998.

It may be impossible to “retro-fit” the standard to address this deficiency. However, since the standard neither contains performance levels, nor prescribes a particular approach to

forest management, it would be possible to link the framework it provides to regional performance standards. If appropriate fora could be established to prepare such standards, then the perceived weaknesses of the CSA standard mentioned above could be turned into strengths. This is because it is much easier to add performance levels to a management systems standard than to change these levels in a performance standard.

The fora should be established at a provincial level and perhaps a province such as British Columbia, which has extensive recent experience in public consultation and policy change, could take the lead and establish a pilot project. Following the ACF, fora should be dominated by professional norms and prestigious enough so that all relevant actors will feel obliged to participate. The work of Model Forest Projects in developing detailed forest management guidelines (e.g., Woodley and Forbes 1995) and the Clayoquot Sound Scientific Panel (1995) provide good examples of the process and products that would be needed. As provincial governments are themselves heavily involved in forest management, it is probably not appropriate that they chair the fora, although they would have to support them and agree to the processes involved. There is however a major opportunity for the federal government to take a leadership role on this issue, drawing on the experience of the Model Forest Projects. Also, the Canadian forestry profession and academic foresters have a chance to rise to the challenge of acting as policy brokers between the Forestry and Environmental Coalitions, rather than being members of one or the other. The scarcity of neutral policy brokers in Canadian forest policy domains has probably impeded progress in resolving many conflicts and should be rectified, now that Environmental Coalitions are increasingly a force to be reckoned with.

It will be recalled from Section 5.4.2 that there are four categories of contemporary forest policy issues in Canada today: forest tenures; where to log; how much and when to log; and how to log. Forest certification cannot address the first two issues and can only partly address the third. Its main focus is on “how to log”. However, for the Environmental Coalition, all four

categories of issues are linked and there is likely to be considerable reticence to accept the *status quo* concerning the first three sets of issues and only discuss the fourth one. Thus, the fora will need to find ways to address all four categories of issues, perhaps in separate working groups.

It may be argued that this proposal duplicates work which has already been done in British Columbia, and will slow certification down until the last disagreement on protected areas or First Nations territorial claims is resolved. Two responses can be made to these objections. First, the fora should certainly draw on work already done by other processes in the province. However the announcements in June 1998 by MacMillan Bloedel and two other companies that they were planning to stop clearcutting in old growth forests and wanted to be prepared for certification, suggest that these processes have not diminished international pressures on forest companies in the province. Second, until the forest tenure system in British Columbia is modernised into an area-based system, and made more equitable so that communities and smaller operators can obtain licences, improved forest management is likely to be difficult to achieve. Similarly, until the contentious issues of clearcutting old growth forests and First Nations territorial claims are at least in the process of being resolved, it is hard to see the necessary serenity in the policy domain for the effective formulation of performance standards for certification.

5.7.2 Forest Certification in Canada and the Advocacy Coalition Framework

5.7.2.1 Advocacy Coalitions in Canada

The research carried out for this thesis confirmed previous work by Canadian researchers who have argued that forest policy domains in Canada are dominated by a Forestry Coalition (Hoberg 1996a; Lertzman *et al.* 1996; Wellstead 1996). The main actors in this coalition are the forest industry and relevant government departments, which have functioned together in a clientelistic manner over decades. However, particularly in British Columbia (and to a lesser degree at the federal level), a newer Environmental Coalition has appeared and gained

influence. In Canada, forest certification has largely been promoted by the Forestry Coalition as a way of responding to national and international criticism of its performance by NGOs.

The Canadian case thus provides support for one of the basic premises of the ACF: that coalitions are stable alliances of actors sharing policy beliefs, rather than temporary “coalitions of convenience”. The ACF has two hypotheses on advocacy coalitions. The Canadian case provides support for the first, and allows for a discussion of the second.

Hypothesis 1: On major controversies within a policy subsystem when policy beliefs are in dispute, the lineup of allies and opponents tends to be rather stable over periods of a decade or so.

This chapter has provided evidence that on the major controversies in Canadian policy domains over the last decades (i.e., forest tenures, where to log, how much and when to log and how to log, as discussed in Section 5.4.2), the dominant Forestry Coalition has almost invariably presented a strong and united front. Similarly, even before the existence of an opposing Environmental Coalition could be shown, individual actors such as NGOs tended to take a consistent position against the Forestry Coalition.

Hypothesis 2: Actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core, but less so on secondary aspects.

The Environmental Coalition in British Columbia provides some support for this hypothesis. We can see NGOs and First Nations in the province as being in basic agreement about the need to protect forests from logging, and sharing the view that industry controls too much of the province’s forest lands. However, there are differences about the mechanisms (i.e., secondary aspects) needed to address these problems, with the First Nations seeking land rights through treaty negotiations and the NGOs wanting to establish national parks.

On the other hand, the 1991 legal dispute between MacMillan Bloedel and the British Columbia Chief Forester, described in Section 5.4.1 was not about secondary aspects of the belief systems of the actors involved. As Dellert (1994) has shown, the dispute was about core policy beliefs such as the definition of the problem, and the identification of social groups whose welfare is most critical. Admittedly this was an unusual situation, and most of the disputes between the forest industry and provincial forest ministries tend to be about secondary aspects such as budgetary and planning issues. It should be noted that the 1991 court case came at the beginning of a period of major policy change in British Columbia which involved the emergence of the Environmental Coalition as an important player in the policy domain. Based on this, an addition to Hypothesis 2 can be proposed:

Hypothesis 2b: Public conflicts between coalition members concerning policy core issues are likely to be a warning sign of impending policy changes in the domain and/or the emergence of a new advocacy coalition.

This example also provides support for ACF Hypothesis 10 on coalition learning, because the Chief Forester did not fully support the industry position, but took an intermediate view between that of industry and NGOs:

Hypothesis 10: Within a coalition, administrative agencies will usually advocate more centrist positions than their interest-group allies.

5.7.2.2 Policy Change

Certification itself has not yet led to public policy change in Canada in the sense that the CSA programme is not mentioned in provincial or national forest policy or legislation. However, it has been suggested by Clancy and Sandberg (1998) that the support of provincial forest ministries for the development of a Canadian forest certification system (as expressed in the 1992 National Forest Strategy), and the

subsequent involvement of the CSA in organising the TC, signify a shift in the structure and power relations of the national forest policy domain. In particular, it is suggested that the forest ministries' acceptance of CSA developing the forest management standard with NGO involvement, implies a change in roles, with part of policy development being delegated to the private sector, and participation being broadened. This is consistent with the findings of this thesis that an Environmental Coalition is emerging at the national policy domain level.

The development of the CSA programme has been part of a broader process of policy change at the federal and provincial levels. Examination of some of these changes allow a discussion of two of the ACF Hypotheses on policy change. It has already been noted in Section 5.4.1 that events in the British Columbia and New Brunswick policy domains provide support for ACF Hypothesis 4:

Hypothesis 4: The policy core (basic attributes) of a governmental programme in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that initiated the programme remains in power within that jurisdiction – except when the change is imposed by a hierarchically superior jurisdiction.

The fact that policy change in the British Columbia forest policy domain was initiated by the Provincial Premier rather than the Minister of Forests, suggests that “hierarchically superior jurisdiction” should be interpreted to include elected officials in the same political jurisdiction (i.e., British Columbia), but not in the same policy domain.

Following the ACF, policy change in British Columbia should have been preceded by external system events and skilful exploitation of these events by actors in the policy domain:

Hypothesis 5: Changing the core policy attributes of a government action requires both: (1) significant perturbations external to the system (e.g., changes in socioeconomic conditions, system-wide

governing coalitions, or policy outputs from other systems); and (2) skilful exploitation of these opportunities by the (previously) minority coalition within the subsystem.

The events in the early 1990s in British Columbia, described in Section 5.4.1, provide strong support for this hypothesis. However, they also show that points (1) and (2) can be linked: the NGOs in British Columbia were not simply skilfully exploiting opportunities provided by external system events. Greenpeace, in particular, was active in lobbying European purchasers of forest products from the province to cancel orders. Thus, what appeared as an External System Event, was actually partly the result of work by actors in the policy domain.

In terms of Hypothesis 5, it seems a small matter to link conditions (1) and (2). However for the ACF in general, if actors within a policy domain are able to influence External System Events, a number of theoretical problems arise. The framework (see Figure 2.1, Chapter 2) has a one-way arrow from External System Events to the actors in a policy domain. The only way in which a policy domain is supposed to be able to influence External System Events is through policy impacts from a governmental programme, which did not occur in this case. Although the ACF does not explicitly consider External System Events to be the independent variable, this is implied. Yet here we appear to have an example of a dependent variable (i.e., actors) affecting an independent variable. It will be recalled from the Indonesian case that a similar problem arose there. In addition in Indonesia, a Relatively Stable Parameter (basic distribution of natural resources) was changed through deforestation and forest degradation caused partly by actors in the policy domain. These observations call for several changes in the ACF, and a proposal for this is made in Chapter 7.

5.7.2.3 Coalition Learning

As with policy change, there is little evidence of policy-oriented learning across belief systems having occurred during the development of the

forest certification programme in Canada. This is consistent with ACF Hypothesis 6.

Hypothesis 6: Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that

- i) each has the technical resources to engage in such a debate; and that
- ii) the conflict be between secondary aspects of one belief system and core elements of another or, alternatively, between important secondary aspects of the two belief systems.

None of these conditions is met in New Brunswick, British Columbia, or in the national forest policy domain. Conflicts (particularly in British Columbia) are extreme rather than intermediate with occasional episodes of civil disobedience. The technical resources of the Environmental Coalition are weak in most policy domains. Finally, disputes are generally about policy cores of belief systems, not just secondary aspects.

A number of fora for policy dialogue were created in British Columbia in the 1990s. The best known was the Commission on Resources and Environment (CORE). Although there has been criticism by NGOs of the way that these fora operated, and how their recommendations were implemented, they were generally dominated by professional norms and prestigious enough to force professionals from different coalitions to participate. This provides support for another ACF hypothesis:

Hypothesis 9: Policy-oriented learning across belief systems is most likely when there exists a forum which is:

- (1) prestigious enough to force professionals from different coalitions to participate; and
- (2) dominated by professional norms.

Unfortunately for the CSA, the Technical Committee (TC) that developed the CSA certification standard does not appear to have fulfilled these two criteria. This partly explains the lack of policy-oriented learning **across** belief systems associated with it, although the TC did provide a forum for learning **within** the Forestry Coalition on environmental management systems and sustainable forest management. Concerning participation, key NGO figures did not consider the TC to be prestigious enough for them to have to participate. The way in which the management systems framework for the standard was predetermined by CPPA and CSA, and the way in which CSA sought to present the composition of the TC as being balanced when it was not, do not appear to be compatible with a forum dominated by professional norms.

It is easy to criticise CSA or CPPA for not having created a prestigious forum dominated by professional norms for the development of the Canadian forest certification standard, and in retrospect it does seem that they could have done more in this direction. However, following the ACF, we can expect policy-oriented learning across coalitions to be difficult in a domain where there are serious conflicts over core beliefs, and the minority coalition has a low level of technical resources. Under these circumstances it is going to be difficult to create the optimal kind of forum for policy learning and get the relevant actors to participate in it. Thus, the weaknesses of the TC as a policy forum stem as much from the overall situation in the national forest policy domain, as from bias in its funders and convenors.

Chapter 6

Forest Certification in Sweden

In the Swedish case study, the Advocacy Coalition Framework (ACF) was applied to study the development of a forest certification programme, which took place between 1992 and 1997. Unlike in Canada, forest policy is decided at the national level in Sweden, and most forest lands are privately owned. However, forest ownership and forest practices vary across the country and research was carried out in the north, centre and south of Sweden to take account of this.

Data were collected during three trips to Sweden totalling approximately six weeks. This included field visits to forest operations in the three regions. There is an abundant primary and secondary literature on forestry in Sweden, much of which is available in English. It was, however, necessary to translate some documents, particularly the minutes of meetings of the Swedish FSC working group.

6.1 HISTORICAL OVERVIEW OF FOREST MANAGEMENT AND POLICY IN SWEDEN

In 1732 when Linneaus first visited the boreal forests of northern Sweden he remarked:

The large forests are desolate and wasteful, because no-one needs the timber which falls down and decays (Linneaus 1732, cited in Östlund *et al.* 1997).

There have been many transformations in the forests of northern Sweden since Linneaus' time (Linder and Östlund 1998). However even before Linneaus, forest landscapes had undergone

significant changes in southern and central Sweden. Swedish accounts of forest history normally discuss these three regions separately. The following overview of forest history below draws on Ekelund and Dahlin (1997).

By the 1600s, large areas of forests in southern Sweden had been transformed into grazing lands or agricultural fields. With the beginning of the industrial revolution in the UK, there was an increased demand for timber from Sweden. This, added to timber consumption from a growing Swedish population, led to further deforestation, while livestock grazing in forests contributed to forest degradation in many areas. By the 1850s, the area of forest in southern Sweden had sunk to an all-time low since the last ice age. This prompted concerns in the government and administration, which spread to parliament and led to the adoption of the first national Forest Act in 1903. This act sought to promote forest regeneration in harvested areas and established County Forestry Boards to encourage this. These Boards continue to exist today. Since 1850, the area of forest in southern Sweden has recovered to above the level of the 1650s. The forests are different however, with Norway spruce (*Picea abies*) predominating, instead of mixed forests of coniferous and deciduous species.

Forests in central Sweden have a very different history to those in the south, because of mining activities in this part of the country. In some areas (for example, around the town of Falun where the company Stora is based), they have been exploited since the middle ages to provide timber for mining and charcoal for smelting mineral ores. Mining and smelting intensified considerably

during the industrial revolution, and in the mid-19th century companies such as Stora hired German-trained foresters to ensure adequate supplies of timber. Silviculture in Sweden can be considered to have begun at this time.

Finally, forestry in northern Sweden began only in the 1850s, again due to the demand for timber during the industrial revolution, particularly from the UK. Timber was transported along rivers from the interior to the coast, where modern sawmills were established, often under foreign ownership. Large areas of forests were purchased or leased from private owners by companies. Concerns grew among farmers in the region about the political and economic implications of corporate acquisition of land, and in 1905 the parliament passed a law prohibiting such purchases. The law has since been rescinded, but its effects seem to remain in that forest companies in Sweden do not normally seek to purchase privately owned land, unless this is part of an exchange of property to improve operational efficiency. Forestry in northern Sweden was characterised at the time by high-grading, inadequate understanding of forest dynamics and generally resulted in poor regeneration. Forest regeneration activities only really got under way in the 1950s. Most of Sweden's large protected areas, and the zones grazed by reindeer owned by the indigenous Sami (Lapps) are found in the north.

Forest policy in Sweden has been expressed in a number of Forestry Acts since 1903. Until the late 1980s there was a heavy policy emphasis on increasing wood and fibre production, although Swedish NGOs began expressing concerns about the environmental impacts of forestry in the 1960s (Eckerberg 1994). The development of environmental legislation in forestry began in 1972, when a commission of inquiry was established by the Ministry of Agriculture (which at that time was responsible for forestry) to investigate the extent and environmental impacts of clearcutting, one of the issues raised by NGOs.

The commission concluded that clearcutting was indeed the preferred harvest method in Swedish forestry, but that measures could be taken to mitigate its impacts:

The negative impression from clearcutting could quite easily be diminished...Such measures as to retain single trees and buffer strips adjacent to residential areas and along roads and lakes, to adjust the geometry of the clearcut areas to landscape features and to clean old forest paths from logging debris...should all be possible to combine with economic forestry...In order to express this common desire, the requirements of the Forestry Act should include a general deference to environmental protection (Ministry of Agriculture report Ds Jo 1984, cited in Eckerberg 1987: 64).

It is interesting to note that most of these measures have now been adopted as standard practice in Swedish forestry, but for environmental reasons (primarily the conservation of biodiversity) rather than the aesthetic motivations that appear to lie behind this text. The Swedish parliament received the commission's report favourably, and in 1974 the Forestry Act of 1948 was modified in two ways in respect to environmental protection: a general recommendation to forest owners to consider environmental interests; and a requirement to notify the local County Forestry Board before clearfelling a forest area greater than 0.5 ha (Eckerberg 1987). The second provision was intended to allow the County Forestry Board to recommend any necessary environmental protection measures in the area before harvest operations commenced.

However, as the Forestry Act was being modified, a second commission of inquiry (also established in 1973) was working on a new Act. This commission predicted serious overexploitation of Swedish forests in the first part of the 21st century, because in 1970, for the first time since the 1920s, forest fellings exceeded growth (SOS 1997). In consequence, it recommended a range of measures (including subsidies for silvicultural activities, and the possibility of requiring forest owners to harvest timber on their lands) to increase production.

These were largely adopted in the new 1979 Forestry Act (Gamlin 1988). In retrospect, the concerns about timber shortages appear to have been exaggerated because standing volume of timber in Swedish forests has been increasing steadily since the 1920s when national forest inventories started, and forest growth rates had again overtaken fellings by the mid-1970s, even before the Act was passed (SOS 1997).

The 1979 Act was very production oriented. The environmental clauses introduced in the 1974 revision were not removed, but it was made clear that the forest owner could only be subjected to fines if he or she had neglected to obey a specific environmental prescription issued by the County Forestry Board. Neither individual members of the public, nor NGOs could sue a forest owner who did not comply with regulations. Instead they had to lobby the government authorities to act. In a detailed review of the implementation of the environmental aspects of the 1979 Act, Eckerberg (1987) has concluded that this indirect approach was not effective and should be modified. The philosophy behind the Act was that the role of the County Forestry Boards was educational rather than punitive, and this attitude still prevails today (Ekelund and Dahlin 1997).

Partly as a result of the Act, the 1980s was a decade of many conflicts in Swedish forestry. Issues such as protection of broadleaved forests in the south, and mountain forests in the north, clearcutting, herbicides, chlorine bleaching, and the use of exotic species, generated considerable controversy between NGOs and the forest industry. These controversies were initially domestic in nature, but by the late 1980s the debate gradually became more international as Swedish NGOs collaborated with their counterparts in export markets (particularly in the UK and Germany) to put pressure on the Swedish forest industry. Swedish NGOs used the forum provided by the United Nations Conference on Environment and Development (UNCED) in 1992 to intensify their criticism of the environmental impacts of Swedish forestry practices.

It was also in the late 1980s and early 1990s that quantitative evidence began to emerge about the impact of forestry practices on forest-dependent species (e.g., Erickson *et al.* 1983; Andersson and Hytteborn 1991; Zackrisson and Östlund 1991; Ahnlund and Lindhé 1992; Angelstam *et al.* 1993; Angelstam and Mikusinski 1994; Altegrim and Sjöberg 1995). This, together with the emergence of biodiversity conservation as an international policy issue at the same time, gradually led to a reframing of the debate to focus on biodiversity issues.

After UNCED, and in an economic climate characterised by budgetary cutbacks, a new Forest Policy was adopted by Parliament in 1993, followed by a new Forestry Act in 1994. The Forest Policy included a production and environmental protection goal and stated that both should be given equal emphasis. Subsidies for silvicultural activities were severely reduced in the 1994 Forestry Act (NBF 1994).

Meanwhile, during the early 1990s, a number of changes began to occur in forest companies. Forest ecologists were hired and programmes for ecological landscape planning were initiated in most of the larger companies (Hansen *et al.* 1998). This provided a basis for dialogue and technical co-operation with NGOs. Thus when the idea of developing a Forest Stewardship performance standard for forest certification in Sweden was first proposed in a WWF-Sweden feasibility study carried out in 1992 and 1993, reactions from the forest industry were generally positive although private forest owners'⁵⁸ representatives were more cautious (Rosenberg 1993).

In 1994, WWF-Sweden and the Swedish Society for Nature Conservation worked on a set of "criteria" for biodiversity conservation in Swedish forestry, in consultation with a "reference group" of scientists and other forest sector actors. These criteria were published in May 1995. After

⁵⁸ The term "private forest owner" is used in Sweden to refer to individual forest owners (smallholders) rather than industrial owners, which are normally called "forest companies".

extensive negotiations between industry, forest owners' associations and other actors, a Swedish FSC working group was established in February 1996. This group produced a standard in June 1997, which was approved by the FSC board in January 1998 as the first FSC national standard in the world. It should be noted that the representatives of forest owners' associations withdrew from the group in April 1997 and have subsequently criticised the standard. Even before the standard was endorsed by the FSC board, it was used for certification and by July 1998 three forest companies had a total of over 4 million ha of forests certified (FSC 1998a).

Certification has thus been implemented rapidly in Sweden, unlike in Canada. Before reviewing the development of the Swedish forest certification programme, and comparing it to the Canadian experience, it is necessary to examine the Relatively Stable Parameters, External System Events and the forest policy domain, following the ACF framework.

6.2 RELATIVELY STABLE PARAMETERS

6.2.1 Basic Distribution of Natural Resources

Sweden has an area of 450 000 sq km of which 227 000 sq km are classified as forest (SI 1996a). The population in 1995 was 8.8 million; 80% live in the southern third of the country, and 85% live in urban areas (EIU 1996). Most Swedish forests fall into the boreal and hemiboreal, zones which are dominated by Norway spruce (*Picea abies*), Scots pine (*Pinus silvestris*), birches (*Betula* spp.) and aspen (*Populus tremula*). There is a small area of temperate forest in the south.

The majority of Sweden's forests are available for timber harvesting (see Table 6.1). Protected areas only cover 3.6% of productive forests, and 85% of these are made up of high-altitude conifer forests in the north. Outside this region, less than 1% of productive forests are protected (Esseen *et al.* 1997). A long history of forest exploitation has led to many changes in Swedish forests. Even in northern Sweden, where

forest exploitation is more recent, clearcutting has profoundly altered the landscape structure, which is now dominated by large areas of even-aged young conifers in many areas (Esseen *et al.* 1997; Östlund *et al.* 1997). Loss of old-growth forests and reduction of dead wood, fire suppression, drainage, and consequent changes in forest structure and species composition have had impacts on biodiversity. Fifty-nine forest-dwelling vertebrate species, 986 invertebrates and 764 plants are "red listed" in Sweden.⁵⁹ Overall, forest species account for more than half the total number of red listed species in the country (SEPA 1994; Ekelund and Dahlin 1997). In view of this situation, the forest conservation debate in Sweden currently focuses on biodiversity, forest

Table 6.1 Swedish Forest Lands Classified by Function

Forest function	Area (x 1000 ha)
Protected forests (national parks and nature reserves)	786
Productive Forests (available for timber production)	21,914
Total Productive Forests (Swedish definition)	22,700

Notes:

1. An additional 4 million ha of mountain "forests and other wooded lands" in the north (FAO definitions), which do not meet the Swedish definition of "productive forests", have also been set aside from logging by the government but do not benefit from formal legal protection (SI 1996a).
2. The Swedish definition of productive forests is based on an annual productivity of 1 cubic metre per hectare (ha). FAO has a different definition: tree formations with crown cover or more than 20% of the area. In addition to forests, FAO recognises the existence of "other wooded lands" with a crown cover of between 5% and 20%. Because of these differences in definitions, FAO statistics list Sweden as having a total of 24.4 million ha of forests and 3.6 million ha of other wooded land.

Sources: FAO (1995); SI (1996a); SOS (1997)

⁵⁹ Red-listed species are those that are classified by the Swedish Threatened Species Unit as extinct, endangered, vulnerable, rare or care-demanding.

restoration in managed forests and increasing the area and geographical balance of the protected area system (Angelstam and Pettersson 1997).

6.2.2 Basic Attributes of Problem Area or Good

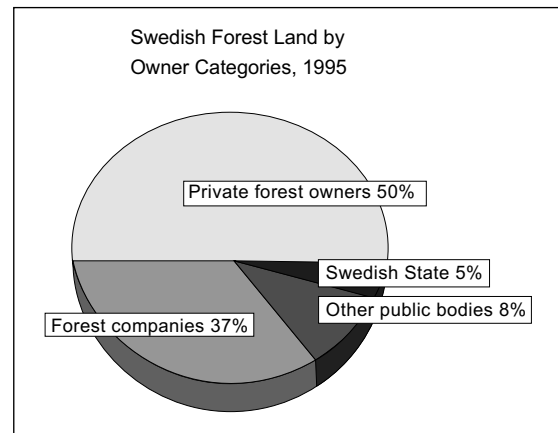
A major difference between Sweden and most other major timber-producing countries is the low level of forest ownership by the state (5% of productive forest lands). In 1993, as part of a privatisation and restructuring effort by the non-socialist coalition government, most of the state-owned timber lands were transferred to the forest product corporation AssiDomän in which the state owns 51% of the shares, while the remainder are quoted on the stock exchange. This made AssiDomän, the largest private forest owner in the world with 3.2 million ha of productive forests (AssiDomän 1997).

Forest companies own 37% of forest lands (Figure 6.1). There are 14 companies in the Swedish Forest Industries Association, but six of these together own 95% of this area-AssiDomän, Graninge, Korsnäs, MoDo, SCA and Stora (SFIA 1996a, SI 1996a).

Forest company land is found throughout Sweden, but the largest areas are in the north. In this region large, contiguous holdings can be found.⁶⁰ In the south, forest holdings form a patchwork in which private lands and those owned by companies are intermixed. To reduce costs of transportation to the mills, exchanges of timber between companies and between companies and private forest owners are common.

Private forest owners own 50% of productive forest lands. There are some 250 000 holdings owned by 354 000 individuals, and they constitute the dominant category in southern Sweden. Until the 1950s, most private forest owners were farmers who lived on their land but today these are a minority. Most forest owners live in nearby communities or cities, and contractors, forest companies or employees of the forest owners' associations often carry out the forestry work on their land. Approximately one-quarter of the private forest owners are members of these regional associations, which are grouped

Figure 6.1 Ownership of Swedish Forest land



Source: SI (1996a)

together in a national federation (SI 1996a, Ekelund and Dahlin 1997). Other public bodies, such as the Church of Sweden and municipalities, own 8% of productive forest lands.

Although most of Sweden's forests are privately owned, the traditional Swedish "right of common access" allows public access for recreation, berry-picking, etc., and this is widely used. Hunting rights belong to the landowner who may lease them to others. Approximately 300 000 Swedes are registered hunters (NBF/FAO 1998). In addition, in northern Sweden the Sami practise reindeer grazing on privately owned forest lands under a system of "customary rights" that has gradually been codified into law, although ambiguities remain as to the delimitation of the winter grazing areas which can be used by the Sami. Partly as a result of this, reindeer grazing is controversial in some areas, with the Sami arguing that modern forestry practices are depleting the lichens on which reindeer feed in winter (these lichens mainly grow on old trees), while forest owners complain of damage to vegetation caused by the reindeer (SI 1997a).

⁶⁰ Some Swedish forest companies also own forest lands and plants abroad. For example, Stora owns or leases forests in Brazil, Portugal, Russia and Canada, and has plants in a number of countries (Stora 1997).

6.2.3 Fundamental Cultural Values and Social Structure

Fundamental cultural values in Sweden include support for democratic government, social solidarity and press freedom.⁶¹ Unlike Canada, Sweden is a unitary rather than a federal state, although there is a long tradition of local government institutions, which now have an important role in land-use planning and environmental protection (Eckerberg 1987). The modern Swedish State has evolved gradually from a society dominated by monarchs in the Middle Ages. In 1809, absolute monarchy was abolished and a written constitution was adopted. Universal male suffrage was introduced in 1909 and women have been able to vote since 1921, the date usually taken to signify the beginning of modern parliamentary government in Sweden (Hadenius 1997).

After WWII, until the mid-1970s, an uninterrupted series of Social Democratic governments established a “Swedish Model” of government. This consisted of a number of elements: labour negotiations with strong unions; a consensual approach to resolving social conflicts; a corporatist approach to organising social actors; full employment; and a technocratic approach to problem-solving (Pettersson 1994). The Swedish approach to policy-making has tended to be based on negotiated consensus between the State and social actors organised into associations. Partly as a result of this, there is a preference for the use of “soft” policy instruments, such as training and communication, and a reluctance to use sanctions (Kelman 1981a).

Although the “Swedish Model” included many socialist components, it differed from socialist systems elsewhere in Europe in that business and industry were not nationalised, although they were heavily taxed. The aim was a mixed economy, with industrial production under private control, and a strong public sector based on services (EIU 1996). In this sense, the ownership structure of forest lands and industry facilities is typical of Swedish industry as a whole.

In 1995, the Swedish GDP per capita was 184 900 Swedish crowns (approx. US\$27 735). The Swedish economy grew rapidly in the 1960s

and 1970s, but this growth slowed to an average of 2% annual increase in GDP in the 1980s. The situation worsened in the early 1990s and between 1990 and 1993 GDP declined by 5% and unemployment (which has traditionally been low in Sweden) climbed to a post-World War II high of 8%. The economy recovered after 1993, and GDP grew by 3.6% in 1995 (EIU 1996; SI 1997b). A highly developed and internationally successful industrial sector forms the backbone of the Swedish economy. Pulp and paper, machinery and equipment, and the chemical industries are important sectors. Overall, exports account for approximately 35% of GDP, and Western Europe is the main destination, although diversification into other markets is under way. Forest products still account for 17% of exports (compared to cars and trucks at 12%), although this proportion is declining due to the growth of manufacturing and services (SI 1997b). The most important countries for forest product exports are Germany, the UK, Denmark, Holland, France and Italy (SFIA 1996b).

6.2.4 Basic Legal Structure

Sweden is a constitutional monarchy, with the monarch as nominal head of state, but with no political power. Executive power is held by the cabinet of ministers, which is appointed by the prime minister. The prime minister is selected by the parliament, whose 349 members are elected by proportional representation. This parliament (*Riksdag*) is the legislative authority. The Social Democratic Party has dominated parliament for most of the post-war period, but between September 1991 and September 1994, a non-socialist coalition led by Conservative Party member Carl Bildt formed the government. The Social Democrats regained power in September 1994. The current prime minister is Göran Persson.

The Swedish parliament often expresses political objectives in terms of frame-laws, or

⁶¹ Since 1776 Sweden has had a Freedom of the Press Act as part of the constitution, which makes most government documents accessible to the media as well as to private citizens (EIU 1996)

Acts, and in sectoral policy statements. These Acts are rather general and are subsequently complemented by regulations and advice prepared by the administration. When a new Act is to be prepared, the parliament normally asks the relevant ministry to name a commission of inquiry, which then functions with considerable autonomy. Members are drawn from several parties in the parliament and also include representatives of actors, such as trade unions, and academic experts on the subject (Petersson 1994). These commissions have had significant influence in shaping policy in a number of areas, partly because Swedish ministries have limited staff capacity. Their role in the revision of Forestry Acts was described in Section 6.1. Because of the detailed preparatory work of these commissions (which is published as a report) and the subsequent regulations and advice developed by the administration, Swedish Acts are generally short and focus more on policy objectives than details of explanation or implementation. In addition to the work of the commissions, actors' views are taken into account during the "referral" process, a series of consultations on draft legislation designed to address potential conflicts in a proactive manner before the legislation is finalised (Eckerberg 1987).

Ministries are relatively small (each with approximately 100 employees) and work primarily on the preparation of legislation (in collaboration with commissions of inquiry), budget appropriation and regulations and directives for the administrative agencies. Ministries are not normally engaged in the implementation of legislation nor with the details of administration. This task is left to administrative agencies such as the National Board of Forestry. Each agency is headed by a Director General appointed by the government and has a board on which relevant actors, such as trade unions, academics and associations, are represented. The administrative agencies may collaborate together as necessary without referring to their respective ministries (the Ministry of Industry and Commerce in the case of the National Board of Forestry) and, like the parliamentary commissions of enquiry, enjoy considerable autonomy.⁶² The National Board of Forestry

oversees and supports the work of 11 County Forestry Boards, which themselves have district offices. Similar arrangements exist for other administrative agencies (Norrfaik 1998). The process for rule making within the frame-law system is illustrated in Figure 6.2.

Local government has a long tradition in Sweden, and operates at two levels: municipalities and county councils. Both may own forests and have increasingly important roles in local land-use planning and environmental monitoring. After UNCED, the government charged the country's 288 municipalities with developing and implementing local environmental efforts in the spirit of Agenda 21, in collaboration with the local population, associations and businesses (SI 1997c). Local government is mainly funded by direct local income tax. Corporate profits are no longer taxed at the local level (SI 1996b).

In the forest sector, the basic policy framework is provided by the 1993 Forest Policy adopted by parliament.⁶³ This policy takes a multiple-use approach and gives equal emphasis to production and environmental goals. The goals are:

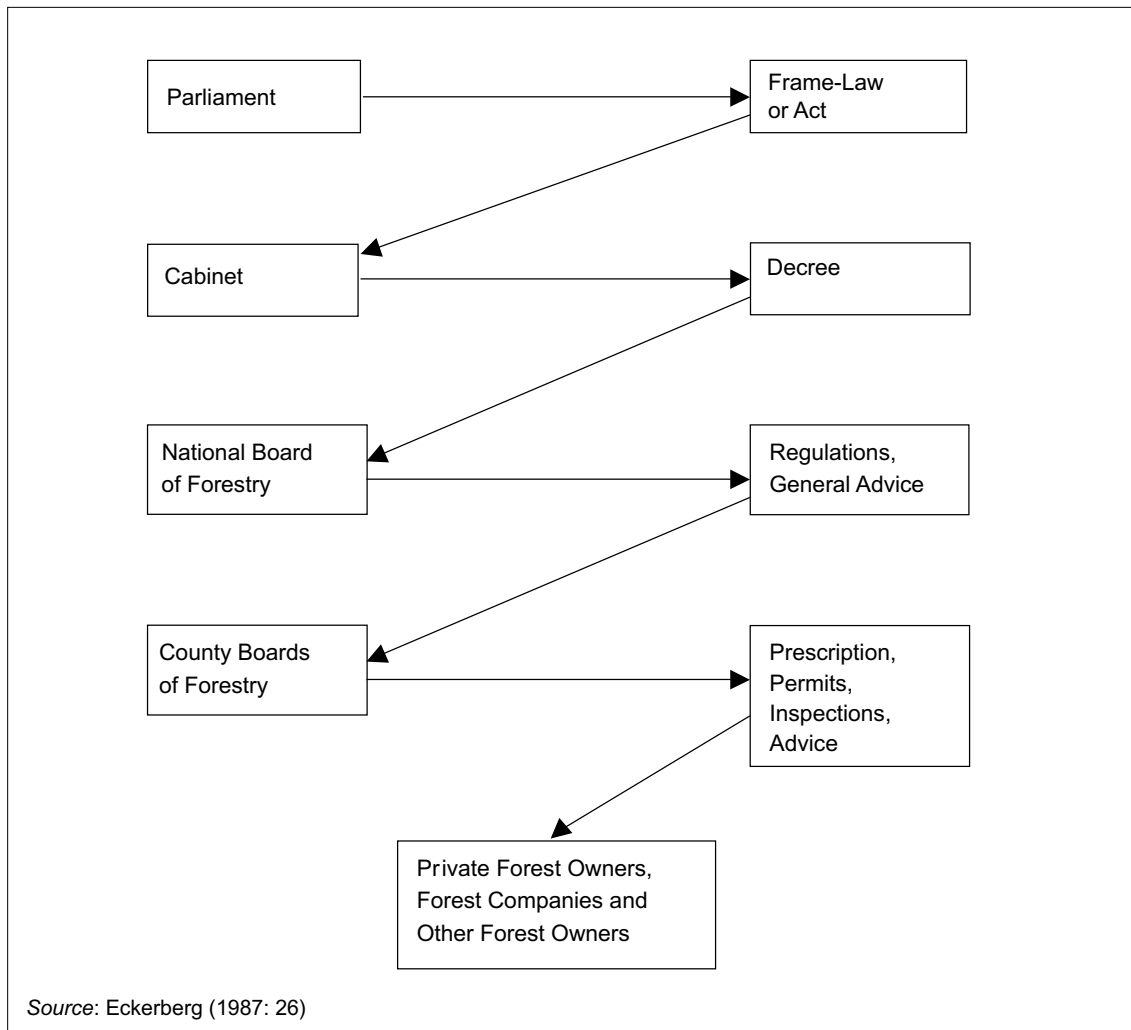
Production goal: Forests and forest lands shall be used efficiently aiming at a sustainable and valuable yield; and

The composition of wood production must be such that it has the potential to satisfy human needs in the future.

Environmental goal: The productivity of forest land shall be preserved. Biodiversity and genetic variation in the forests must be secured. Forests must be managed so that plant and animal species which exist naturally in the forest ecosystem can survive

⁶² The "Instrument of Government 1974", which is part of the Swedish constitution, states that neither the government nor any other administrative agency may influence the way in which any public authority makes a decision concerning the application of law or regulations (Petterson 1994).

⁶³ The 1964 Nature Conservation Act is also relevant as it provides the basis for land purchases by the State for protected areas, and includes some provisions for regulating drainage in production forests (NBF/FAO 1998).

Figure 6.2 Rule-Making Under the Swedish Frame-Law System

under natural conditions and in vigorous populations; and
 Endangered species and habitats shall be protected. The forests' historical, aesthetic and social values must be defended (translation of 1993 Forest Policy in Ekelund and Dahlin 1997: 25).

It should be noted that the environmental goal of the Forest Policy is ambitious in terms of biodiversity conservation, for a country that has such a low proportion of productive forests in

protected areas, and where forests have been managed intensively for so long. It was adopted by the parliament as a way of implementing the commitments made by Sweden in the UNCED Forest Principles and the Biodiversity Convention (SI 1996a). The Forest Policy takes a "sectoral" approach to environmental issues in production forests, making them the responsibility of the forest owner, under the supervision of the County Forestry Boards (NBF/FAO 1998).

The policy specified the following general means for achieving the environmental goal:

- environmental considerations to be considered in all forestry operations;⁶⁴
- key habitats to be protected for biodiversity protection;⁶⁵
- new and permanent ditching and draining prohibited in large areas of the country, mainly in the south; and
- nation-wide inventories of key habitats to be carried out by the County Forestry Board; and, an increase in the area of nature reserves.

Compared to the previous forest policy, there is more emphasis on extension and communication and less on subsidies, inventory and regulations. The 1979 Act and its regulations specified in detail the silvicultural practices to be followed by forest owners, and the County Forestry Boards were mandated to ensure that these practices were followed. The forest owners had little flexibility with respect to silvicultural practices. The 1994 Act took a different approach, and gave greater responsibility and freedom to forest owners, which they welcomed. Accordingly, the role of the County Forestry Boards came to focus more on extension and communication. The reasons given for this evolution by the National Forestry Board are that there is a general trend in Sweden towards deregulation and reduced state intervention in the economy, and the budgetary resources to provide subsidies are no longer available (NBF 1994). These reasons are no doubt valid, but it should be noted that even before the 1994 Act was passed, Forestry Boards preferred to use communication tools rather than regulation to influence forest owners. For example, at least until 1996, no forest owner had ever been fined in Sweden for violating environmental regulations in forest management (Eckerberg 1996). On the other hand, over 100 000 private forest owners have participated in training courses on environmental considerations in forestry under the “A Richer Forest” programme which began in 1990, before the new Act was approved by parliament. This programme was widely considered to have been successful (SI 1996a). The use of communication tools is

consistent with the general preference in Sweden for “soft” policy tools, as mentioned in the previous section.

It has been questioned by both academics and staff of the National Board of Forestry (Eckerberg 1994) whether the requirements and policy tools provided by the 1994 Forestry Act are sufficient to achieve the goals of the Forest Policy. This is particularly the case for biodiversity conservation, because of the increased freedom given to forest owners under the new Act, combined with inadequate budget resources to compensate forest owners for protecting key habitats. A preliminary evaluation of the impacts of the new Forest Policy by the National Forestry Board tends to confirm these concerns (P. Hallerstig, personal communication, March 1998).⁶⁶ The existence of a gap between the goals of the Forest Policy and the requirements of the Forestry Act, and the support of the policy for greater responsibility of forest owners, has probably been one of the factors providing a favourable context for the development of forest certification in Sweden.

⁶⁴ Although the 1994 Forestry Act and the 1993 Forest Policy refer to all categories of forest land in Sweden regardless of ownership, in practice the County Forest Boards tend to concentrate their efforts in both extension and control, on private forest owners because the forest companies are viewed as having the necessary resources and being in the process of putting systems in place. For example, company ecologists are responsible for identifying the key habitats mentioned in the policy on their land whereas the County Forestry Boards carry out this activity on private forest owners lands (D. Kihlblom, personal communication, March 1998).

⁶⁵ This is an ambitious objective. However, the subsequent 1994 Forestry Act specified that any measures which substantially reduce wood production must be compensated for by financial payments to the forest owner by the government. Since funding for this is inadequate this goal has been difficult to achieve on private forest owners' lands in many cases.

⁶⁶ The evaluation also indicates that both private forest owners and the forest industry prefer the 1994 Act to that of 1979, as it gives them more responsibility and freedom. On the other hand, staff of the County Forestry Boards appear to feel that they have lost influence and authority under the new Act.

6.3 EXTERNAL SYSTEM EVENTS

The ACF identifies four categories of External System Events that can promote policy change: changes in socioeconomic conditions; changes in public opinion; changes in systemic governing coalitions; and policy decisions and impacts from other subsystems. All of these played a role to some degree in Sweden.

In terms of changes in socioeconomic conditions, the economic recession and growing unemployment in the early 1990s was one of the factors leading to the election of a non-socialist dominated parliament in 1991 (Hadenius 1997). This represented a change in the systemic governing coalition, as defined by in the ACF. The prime minister at the time, Carl Bildt, implemented a series of spending cuts and a programme of deregulation of the economy. The transfer of State timber lands to AssiDomän, the new Forest Policy and Act, and staff and budgetary reductions at the National Board of Forestry, were all approved or implemented under the Bildt government, although the Policy and Act had been under preparation for several years.

During this time Sweden also joined the European Union in March 1994. This had an important impact on the forestry sector; the arrangements under which domestic prices of forest products were fixed by negotiations between forest owners' associations, the forest industry and regional sawmill associations, had to be phased out because of EU competition directives (NBF/FAO 1998). In ACF terms this is described as a policy impact from another subsystem. Other international impacts included the influence of UNCED on the revision of the Swedish Forestry Act, mentioned in the previous section.

Despite economic measures, the recession initially worsened during the new government's office and received the blame for this from the electorate. The Social Democrats were returned to power in 1994 and were able to benefit from some of the fruits of their predecessors' policies, as GDP grew by 3.6% in 1995. Since their election, the Social Democrats have maintained

a policy of economic reform, while seeking to maintain key components of the public sector services (EIU 1996).

Some analysts of Swedish society argue that a number of the elements characterising the "Swedish Model" have weakened because of these changes in economic conditions. For example, the culture of consensus-based decision-making has often been replaced by conflicts in difficult economic circumstances (Petersson 1994; Hadenius 1997; SI 1997b). Similarly, the growth of unemployment in the early 1990s and the weakening of collective bargaining arrangements with employers undermined the traditionally strong role of labour unions. However, it should be noted that almost 85% of "blue collar" and 70% of "white collar" workers are still unionised in Sweden, and the economy is now in a process of recovery (SI 1996c). In the forest sector, mechanisation⁶⁷ has led to significant job losses. For example, total employment in silvicultural activities (including harvesting) declined from 60 000 in 1980 to 28 000 in 1995. Overall, the forest products industry lost 73 000 jobs over this period (SFIA 1996a), while harvesting levels increased by approximately 10% (SOS 1997: 133). Most of the silvicultural jobs were in rural areas. Since, as mentioned above, municipal and county income taxes are the major sources of income for local government, this has contributed to the worsening financial situation of local government in Sweden. As increasing numbers of people exhaust their unemployment insurance benefits (although the unemployment rate has dropped slightly since 1993), municipalities are responsible for providing support (SI 1996b).

In export markets, the Swedish forest products industry faced similar conditions to its Canadian counterpart in the 1990s; pulp and paper prices that were generally low but

⁶⁷ Eckerberg (1987) also blamed mechanisation for many of the violations of environmental regulations in forestry, because of soil compaction and damage to the residual stand by large harvesting machines.

occasionally volatile, and a price rise in 1994 and 1995 that allowed industry to record substantial profits. The current outlook for Swedish exports of forest products is uncertain. Prices were on an upward trend in spring 1998 (Morgan Stanley 1998a) but by late summer this had been reversed (Morgan Stanley 1998b). As in Canada, there has also been significant consolidation in the Swedish industry. In fact, this has gone further than in Canada; from 45 forestry companies active in 1968 there are now 15 (SFIA 1996b; Elghorn 1998). In the summer of 1998, Stora and the Finnish forest products company Enso Oy announced a merger, which created one of the largest forest products companies in the world. Internationally, Swedish companies have better maintained their position in terms of sales than their Canadian counterparts – there were five listed in the “Top 50” of *Pulp and Paper International* in 1976 and four in 1996 (PPI 1977, 1997).

There have been major changes in public opinion concerning forests in Sweden and in the country’s export markets since the 1970s. Forest conservation has become an international issue for NGOs and governments since the early 1980s. Largely because of the activities of the Swedish Society for Nature Conservation (which has local groups throughout the country), the use of pesticides in Swedish forestry has been severely restricted since 1975 (SEPA 1994). Public concerns about clearcutting prompted the establishment of the 1972 commission of inquiry that led to the first inclusion of environmental provisions in forestry legislation. At the international level, a survey of consumers in Sweden’s main export markets indicated that the public is concerned about loss of forest area, species diversity and forest health, and see the practice of forestry in Europe as contributing to a generally poor forest situation. (Rametsteiner *et al.* 1998). In Sweden this has led to tensions between NGOs, who believe in more direct public participation and involvement in decision-making about forestry on private lands, and private owners, who strongly defend private property rights and who argue that public

participation is best channelled through existing democratic institutions. A longitudinal survey focusing on consumer perceptions in Holland, Germany and the UK of Nordic forestry since 1993, suggests that consumers’ impressions of forestry practices in the Nordic countries have become more positive since 1996 (Modig 1997).

6.4 THE SWEDISH FOREST POLICY DOMAIN

6.4.1 Actors and Structure of the Domain

According to the literature on forest policy in Sweden (e.g., Eckerberg 1996; SI 1996a; NBF/FAO 1998) and the interviews carried out for this thesis (Table 1, Annex 6.2), there are four key sets of actors in the Swedish forest policy domain: private forest owners; the forest industry; NGOs; and the government.

Of the 345 000 individual forest owners in Sweden, 88 000 (i.e., 26%) are members of one of the eight regional forest owners’ associations (SI 1996a). Together, these members own approximately half of all the private forest owners’ forests. The biggest single regional association is Södra in southern Sweden, which has 31 000 members. The associations cooperate nationally in the Swedish Federation of Forest Owners, which is active in lobbying the parliament and in communications with the media. The associations became involved in wood processing in the 1950s, and are now account for approximately 10% of Sweden’s sawnwood and pulp production (NBF/FAO 1998).

The most active association in this respect is Södra, which has three pulp mills, including one of Sweden’s first “totally chlorine free” (TCF) pulp mills, and seven sawmills. Södra has 2600 employees and an annual turnover of approximately 6 billion Swedish crowns (US\$900 million) and is one of the world’s largest producers of market pulp. Södra provides technical assistance to its members on forest management, including preparing “green plans”

for addressing environmental issues on owners' properties (Södra 1997a).

The associations are active in advising their members on forest management and conservation issues, as well as in marketing and processing. They also play an increasing role in managing their members' forests on a consultancy basis because the majority of forest owners no longer live in rural areas. The associations were originally formed to improve the financial return on members' forestry operations (SI 1996a). As mentioned above, their role in negotiating timber prices with the forest companies had to be abandoned when Sweden joined the EU in 1994.

The Swedish Forest Industries Association brings together the 15 forestry companies in Sweden, which together own 37% of the country's productive forests, as well as some areas of forest abroad. Its function is to represent the interests of its members, both in Sweden and internationally. Sweden's exports of pulp and paper represent 10% of the world's total, and sawnwood accounts for 11%. Ninety per cent of these exports (100% in the case of paper) are produced by members of the association (SFIA 1996a). The six largest members of the federation are all major vertically integrated companies (four are listed in the top 50 of Pulp and Paper International),⁶⁸ with sawmills and pulp and paper mills in Sweden. The companies self-sufficiency in wood varies from approximately 25% (Stora) to 85% (AssiDomän)⁶⁹ (Morgan Stanley 1998a). The balance is purchased from other companies, from private forest owners or is imported. There are 180 Swedish-owned pulp or paper mills in the rest of Europe and 40% of the paper production capacity of Swedish companies is now located outside the country (SFIA 1996b).

Some of the companies are involved in other areas of activity in addition to forestry but most focus on forest products. Their shares are held both by individual and institutional investors. Some market analysts have criticised the industry's profitability, which is currently

below the cost of capital, and have argued that priorities can be confused if a company is both a paper maker and a large forest owner. For example, AssiDomän's Karlsborg mill has been criticised as an operation whose main purpose is to add value to the neighbouring forest land, rather than to make a profit itself (Morgan Stanley 1998a).

Traditionally, the most important NGO involved in forestry issues has been the Swedish Society for Nature Conservation (SSNC), which was founded in 1909 and now has over 185 000 members. The Society has a democratic structure and the Annual General Meeting of members is its highest decision-making body. There are 270 local branches in Sweden's 288 municipalities, which are staffed by volunteers (SSNC 1996). According to SSNC staff interviewed during research for this thesis, forestry is a high priority for most local branches. The society works together with other NGOs, particularly the youth environmental organisation Fältbiologerna,⁷⁰ which published an important book on forestry and ecology in 1973 (Olssen and Olssen 1973). This book set the scene for much of the subsequent NGO activity related to forestry in Sweden. In addition to forestry activities, SSNC has operated an ecolabelling programme called "Good Environmental Choice"⁷¹ since 1990, which is supported by the largest Swedish retailers and is considered to be highly successful (EPA 1993).

⁶⁸ SCA was listed as number 7 by *Pulp and Paper International* in 1997, Stora as number 12, MoDo as number 26 and AssiDomän as number 31.

⁶⁹ It should be noted that companies frequently barter wood between each other and with private forest owners to reduce transport costs. This means that the actual percentages of wood from a company's forests, which it uses in its own mills, will tend to be lower than these figures.

⁷⁰ Fältbiologerna (the Swedish Youth Association for Environmental Studies and Conservation) was originally set up as a youth branch of SSNC but has grown into an independent organisation. It was represented on the Swedish FSC working group.

⁷¹ Since 1993 the programme has covered paper and paper products.

Both Greenpeace and WWF have national organisations in Sweden. Neither have as many members as SSNC, nor have they traditionally been as active on forestry issues.⁷² However, Greenpeace launched an effective campaign against the use of chlorine in pulp mills in the 1980s and WWF has provided financial support for research projects on forest ecology. In 1992, the Taiga Rescue Network was established in Jokkmokk in northern Sweden. The network brings together a broad coalition of local and international NGOs (including the three mentioned above) to draw attention to conservation problems in boreal forests. Taiga Rescue Network has identified individual companies as “Taiga Terminators” and drawn attention to “Forest Hotspots” where old-growth forests are at risk from logging, both in Sweden and other countries. As an international NGO network, it has served to draw international attention to conservation problems in Swedish forests.

State responsibility for developing forest policy lies with the parliament and the Ministry of Industry and Commerce, whereas policy implementation is carried out by the National Board of Forestry and the County Forestry Boards. This implementation is mostly effected using “soft” policy tools. The State no longer has a significant role as a forest owner, and its activities in policy implementation have been affected by personnel and budget cuts in the last decade (Ekelund and Dahlin 1997). However, it provides funding for research, and is responsible for the National Forest Inventory. It is interesting to note that few respondents interviewed in the research for this thesis listed the National Board of Forestry as an important actor in the national forest policy domain (Table 1, Annex 6.2). The Board played a rather low-key role in the development of forest certification in Sweden. A number of reasons can be advanced to explain this. First, unlike forest administrations in some other European countries, the Board was not in a position of defending “forestry” values against “environmental” ones, as the new Forest Policy

gives equal weight to each. Second, the Swedish State is not a significant forest owner so it has less of a stake in defending the interests of the forest sector. Finally, the Board has faced staff and budget reductions over the last decade, which have diminished its ability to get involved in issues such as certification.

In addition to these major actors, several other less influential actors should be mentioned: the Swedish Forestry Association and Skogssällskapet (Forestry Society), the Sami and labour unions. The Association is a professional grouping of Swedish foresters that promotes both forestry and nature conservation and seeks to maintain an independent position on issues. It publishes a bimonthly magazine, *Skogen*, which is widely read in forestry circles. During the Swedish FSC process, the working group’s secretariat was housed in the Association’s offices near Stockholm. The Forestry Society manages forests on behalf of private forest owners (particularly the estates of larger owners) on a consultancy basis. In this respect, it is in competition with the forest owners’ associations. Unlike these associations, it has been supportive of FSC.

Some 3000 Sami (or Lapps) are involved in reindeer grazing. Together they own approximately 300 000 reindeer. The Sami are organised at the local level into Sami villages and at the national level into the Swedish Sami Federation. There have been numerous conflicts between the Sami and private forest owners in the north about reindeer grazing on private forest lands. This is provided for in the 1971 Reindeer Husbandry Law, but the law does not delimit the exact areas where winter grazing can occur (SI 1997a). This ambiguity has led to conflicts, including court cases that so far have led to rulings against the Sami.

Two labour unions are involved in the forest policy domain: the forest workers union

⁷² Another difference to SSNC is that neither organisation is “democratic” in the sense that policy is determined by the staff and boards, rather than by members.

and the building and wood workers union. The former is involved in collective bargaining processes on working conditions with the forest companies. The two unions are in the process of merging.

The Swedish forest policy domain has a corporatist structure, as do other policy domains in Sweden. In a description of the “Swedish model”, Petersson (1994: 40) notes:

The major interest organizations were co-opted into becoming jointly responsible for large parts of public policy. The organizations participated in all aspects of the decision-making process, both in the preparation phases (initiatives, commissions of enquiry, referrals) and in implementation (representation on public bodies, negotiations and joint responsibility for reforms). The corporatist system is characterized by a partnership between the state and organized interest groups.

The situation outlined by Petersson is a textbook description of corporatism, as defined by van Waarden (1992), who notes that the historic model of corporatism was the professional guild of the middle ages, which regulated a sector by itself, under the supervision of municipal government. According to van Waarden, corporatism involves a well-organised system of interest organisations, with each interest represented by only one organisation. The involvement of these organisations in policy development and implementation increases the mutual dependencies in the network and leads to more symmetrical relations between them and the State than in clientelism or pluralism. There is no clear domination relation, but other interests may be excluded from decision-making. Corporatism is characterised by a search for consensus among the interest groups, and depoliticisation of issues.

In the Swedish forest sector, all of these characteristics can be observed. The situation has been described in a report published by the National Board of Forestry:

the long tradition of various major interest groups and the formation of organizations of a different kind might be said to be a characteristic of Swedish society. These organizations have been built up on democratic principles, their spokesmen as a rule being elected by and among its members. For example, private forest owners are organized in Forest Owners’ Associations, loggers and other wood workers in trade unions, people with an interest in nature protection and conservation are members of various organizations for these purposes, and the Sami people have their own organization for reindeer husbandry etc. (Ekelund and Dahlin 1997: 16).

In corporatism, it is assumed that associations have a monopoly on representation in their particular area (e.g., private forest owners). In this context, the situation of forest owners’ associations in Sweden (which only represent 26% of the country’s private forest owners) may become difficult in future, particularly since their function of negotiating timber prices for members had to be abandoned because of EU competition directives. However, no other body currently claims to represent the 74% of forest owners who are not members of any of the associations.

The presence of NGOs as influential actors in the domain is relatively recent, and it is likely that their position has been enhanced by the FSC process itself, as will be discussed in subsequent sections. Even today, the NGOs are not organised as well as the forest industry and forest owners, and do not have a comparable level of resources or experience in negotiations. They have however been able to effectively use scientific research findings and international policy and market links to pressure the government and forest owners. As recently as a decade ago, their influence was much less and was mostly limited to raising issues in the media and seeking to influence the development of

legislation: according to interviews of various actors carried out by Eckerberg (1987: 151), their impact on policy implementation was not significant.

It seems reasonable to view the forest policy domain in Sweden as traditionally having been dominated by three major actors: forest industry, owners (both represented by associations) and the State. Relations between the private owners and industry were close at the national level (where prices for wood were negotiated and the parliament was lobbied) and at the local level where wood exchanges to reduce transport costs and timber purchases from private forest owners by companies are frequent. The role of the State was to provide a basic policy framework, help resolve any differences and provide training, extension and monitoring to forest owners.

The increasing influence of NGOs in the domain has led to some realignments and the development of the Swedish forest certification programme, which is discussed in Section 6.5, provides a case study of these changes.

In the late 1980s, the Swedish forest policy domain included two coalitions (see Box 6.1). The first and dominant one was a “Forestry Coalition” made up of forest owners’ associations, forest industry and the National Board of Forestry. A second and weaker “Environmental Coalition” was made up of NGOs led by the Swedish Society for Nature Conservation. A review of the literature (e.g., Eckerberg 1987; Gamlin 1988; Rosenberg 1993; SI 1996a) suggests that the deep (normative) core of the belief systems of the two coalitions were quite different. The Forestry Coalition’s normative beliefs included priority to timber production over environmental protection and strong support for private property rights. The Environmental Coalition accorded more importance to environmental protection and considered that private property rights should be subject to limitations if these would benefit the environment. The near (policy) core beliefs of the two coalitions are compared in Table 6.2.

Box 6.1 The Swedish Forest Policy Domain in the Late 1980’s

Forestry Coalition members

Regional forest owners’ associations
 Swedish federation of forest owners’ associations
 Individual forest products companies
 Swedish Forest Industries Association
 National Board of Forestry
 Swedish Forestry Society
 Swedish Forestry Association
 Labour unions

Environmental Coalition members

Swedish Society for Nature
 WWF-Sweden
 Fältbiologerna
 Greenpeace Sweden
 Sami

6.4.2 Current Policy Issues: Problem Definition

The range of current policy issues in the Swedish forest policy domain is more restricted than in Canada, and generally these issues are less controversial. It will be recalled from Section 5.4.2 that contemporary issues and conflicts in Canada can be divided into four categories: forest tenures, where to log, how much and when to log and how to log. Interviews carried out for this thesis (Table 2, Annex 6.2) and the literature (e.g., Eckerberg 1987, 1996; NBF 1994; SFIA 1996b; NBF/FAO 1998) indicate that in Sweden, forest tenures are not a controversial issue. Most forest land is privately owned. Even if the fragmentation of holdings can cause inconvenience in terms of providing fibre supply to mills, various mechanisms have been developed to address this.

The only ongoing tenure issue relates to reindeer grazing by the Sami on privately owned forest land in the north. Reindeer grazing is regulated under a 1971 law which allows the 3,000 Sami who graze 300 000 reindeer in Sweden access to private forest lands in winter (SI 1997a).

Table 6.2 Policy Core Beliefs and Secondary Aspects of the Two Advocacy Coalitions in Sweden in the Late 1980s

Policy Core Beliefs	Forestry Coalition	Environmental Coalition
Definition of the problem	Need for Swedish forest industry to compete in an increasingly competitive international market	Impacts of intensive forestry practices on biodiversity
Identification of social groups whose welfare is most critical	Forest owners, shareholders of forest industry	General public
Orientation on substantive policy conflicts	Economic development	Environmental protection
Basic choices concerning policy instruments	Preference for incentives and communication tools	Preference for more use of regulatory tools
Desirability of participation by various segments of society	Forest owners should have the final say in what happens on their lands, but the public should be kept informed and have a chance to express their views	More public participation is necessary, e.g., local NGOs should have the right to sue forest owners who violate environmental legislation
Ability of society to solve problems in this policy area	Our knowledge of forestry provides the scientific basis to manage forests to meet the needs of society	Our understanding of ecosystems is incomplete and we may be underestimating the impacts of modern intensive forestry on biodiversity
Secondary Aspects		
Decisions concerning administrative rules, budgetary allocations, statutory interpretation and revision	1994 Forestry Act provides adequate basis for forestry operations	Act should be strengthened to allow NGOs to sue violators and budget for establishing new national parks and protected areas needs to be increased
Information concerning programme performance, seriousness of the problems, etc.	Performance of companies, forest owners and National Board of Forestry is adequate. No urgent problems in Swedish forestry	Biodiversity conservation is an urgent problem that has not been properly addressed

Note: In the ACF, the near policy core is difficult to change but this is possible if experience reveals anomalies. It is made up of fundamental policy positions concerning the basic strategies for achieving the normative axioms of the deep core. Secondary aspects concern instrumental decisions needed to implement the policy core, and are moderately easy to change.

Sources: Interviews; Olssen and Olssen (1973); Eckerberg (1987); Gamlin (1988); SFIA (1996a); SI (1996a)

However, there have been conflicts between the Sami and private forest owners on the exact delimitation of these lands, the impacts of modern forestry practices on the abundance of lichens (on which the reindeer feed), and on compensation to the owners if reindeer damage trees. The dispute is between private forest owners and the Sami, as the forest companies have negotiated solutions since the early 1990s. There is an ongoing court case between several private forest owners and Sami reindeer grazers on these issues. Concerning “where to log” there is a broad consensus in the forest policy domain today that the area of forest protected areas needs to be expanded, especially in southern and central Sweden. Both the Forestry Act and the Nature Conservation Act make it clear that these protected areas are to be established by the State by purchasing land from private owners and forest companies. The National Board of Forestry has recognised that the current budget allocated for this task by the government is inadequate, and that it would take over 20 years to protect the key sites, assuming that they were not logged in the meantime – an unlikely assumption (NBF 1996).

Unless or until these protected areas are established, there will be regular controversies concerning the decisions of private forest owners or forest companies to log specific sites, particularly those with old-growth characteristics. However, there is a consensus that it is up to the State, rather than forest owners or NGOs, to resolve this problem. By the summer of 1998 there were indications from the Swedish parliament that the budget for establishing new nature reserves would be increased.⁷³

Outside protected areas, there is also a general consensus that production forestry must take more account of environmental considerations by reducing drainage, leaving more dead wood, protecting small key habitats for endangered species, and encouraging controlled burning in appropriate areas. The “sectoral approach” of the 1994 Forestry Act makes this the responsibility of the forest owner, with the support and guidance of the National Board of Forestry. There are clearly differences of opinion between NGOs and private forest owners and industry about how much has been done in this

regard already, and how much more needs to be done, but the objective of forest restoration to protect biodiversity is not controversial. Specific issues, such as the use of fertilisers, exotic species and pesticides are sometimes contentious. However, looking back on the issues raised by *Fältbiologerna* in 1973 in its influential publication on environmental problems in forestry (Olssen and Olssen 1973), it is interesting to note that many appear to have been addressed, even before the FSC process began (see Table 6.3).

It is clear that the emergence of biodiversity conservation as a specific issue in conservation in general, and forest conservation in particular, since the late 1980s has had a significant impact on the forest policy debate in Sweden, and can even be characterised as a paradigm shift. Many of the individual issues of concern to NGOs and scientists, such as loss of old and dead trees, fire reduction drainage, etc., can be linked to the increasing numbers of red-listed species in Sweden. It is as if biodiversity is the Rome to which all roads of forest degradation lead. Issues such as clearcutting and mechanisation, where the links to biodiversity conservation are indirect, have gradually receded from the policy agenda in the 1990s. Several of the NGOs and academics interviewed during the research for this thesis stressed that the red lists of species (which are established by a government-funded institution) provided incontrovertible evidence of forest degradation in Sweden when they were first established in the late 1980s, and this led to radical changes in attitudes to environmental problems in the forest industry. Subsequently, the negotiation of the Biodiversity Convention in 1992 (which Sweden has ratified) gave further weight to the importance of biodiversity conservation. All of these developments provided a favourable environment for policy-oriented learning about modification of forestry practices to address biodiversity conservation, which proved to be one of the foundations for the development of forest certification in Sweden.

⁷³ In 1999 the parliament approved a major increase in the budget for establishing new nature reserves.

Table 6.3 Issues in Forest Conservation in Sweden Identified by Fältbiologerna in 1973 (Olssen and Olssen 1973)

Issue Mentioned by Fältbiologerna	Status in 1995/96
Increase of size and frequency of clearcuts	<p>Clearcutting is still the dominant harvesting method in Sweden, but the era of large clearcuts has now passed with the setting aside of mountain forests since 1990.</p> <p>In the rest of the country the average size of clearcuts has remained stable: it was 5.8 ha in 1976 and 5.6 ha in 1996 (SOS 1997: 135).</p> <p>It is recognised by environmentalists that clearcutting techniques have improved since the 1970s. Retention of seed trees, deciduous trees and high stumps in clearcuts is now standard practice in the more progressive companies such as AssiDomän (Och and Ottoson 1998). In consequence, clearcutting <i>per se</i> is no longer a major controversial issue.</p>
Increase of conifers at the expense of broadleaves in southern Sweden	<p>An amendment was made to the 1979 Forestry Act in 1983 requiring forest owners to manage "Valuable Broadleaved Forests" (which cover an area of 150 000 ha in southern Sweden) in an appropriate manner to maintain their structure, species composition and functions (Ekelund and Dahlin 1997). The National Board of Forestry has recognised that the current area of reserves in southern Sweden is inadequate to achieve the goals of the 1993 Forest Policy (NBF 1996).</p>
Increased use of herbicides	<p>The use of herbicides in forestry has been much reduced since the 1970s (Eckerberg 1987). By 1996 total usage in the country was 11 tonnes of active ingredients (SOS 1997: 124).</p>
Use of pesticides including DDT	<p>DDT is banned in Sweden. Insecticide use has been much reduced and is stable at approximately 3 tonnes per year of active ingredients for the whole country since 1985 (SOS 1997: 124). The main product used is Permethrin, which is applied as a root treatment in nurseries against pine weevils.</p>
Increased use of fertilisers	<p>In 1973, 122 900 ha were fertilised in Sweden. This area was reduced to 27 300 ha in 1995 (SOS 1997: 125).</p>
Increase in the use of exotic species in forestry	<p>In 1980, 27 400 ha of <i>Pinus contorta</i> was planted. In 1995, the area planted was reduced to 4100 ha (SOS 1997: 121).</p>
Increased use of scarification	<p>In 1970, 62 000 ha were scarified. This increased to 157 200 ha in 1980, and is now declining. In 1995 the area scarified was 137 900 ha (SOS 1997: 119).</p>
Expansion of areas under drainage	<p>In 1975 29 000 ha of forest land was drained. This had decreased to 363 ha in 1996 (SOS 1997: 126-7).</p>
Increased areas of monocultures	<p>The trend towards an increasing use of monocultures of <i>Pinus contorta</i> has been reversed, as mentioned above. There is no data available on trends in the use of monocultures of other species.</p>
Increasing mechanisation of forest industry	<p>Most final fellings are carried out by machines today. However the area of forests where machines are used for pre-commercial thinnings increased from 176 000 ha in 1970, to 367 000 ha in 1990, and has decreased since then to 186 900 ha in 1995 (SOS 1997: 123).</p>
Logging in mountain forests	<p>Since 1990 4 million ha of mountain forest land not classified as productive forests have been protected, as well as an additional 600 000 ha of the 1.5 million ha of productive mountain forest (SI 1996b; Ekelund and Dahlin 1997).</p>

6.5 THE DEVELOPMENT OF A FOREST CERTIFICATION PROGRAMME IN SWEDEN FROM 1992 TO 1997

6.5.1 Chronology of Events

Table 6.4 Chronology of National and International Events Relating to the Development of Forest Certification in Sweden, 1992 to 1998

Year	National events	International events relevant for the development of certification in Sweden
1992	<p>Per Rosenberg hired by FSC to begin consultations on forest certification in Sweden</p> <p>Domän, which later merged with Assi in 1994 to form AssiDomän, and Stora begin work on ecological landscape planning, in collaboration with university scientists and local NGOs and naturalists</p>	<p>UNCED-global approach to forests taken in "Forest Principles"; Biodiversity Convention signed</p> <p>WWF International publishes <i>Forests in Trouble</i> a critical review of the status of temperate forests.</p> <p>Taiga Rescue Network founded in Jokkmokk.</p>
1993	<p>Rosenberg study published in August</p> <p>New Forest Policy adopted by Parliament</p>	<p>Helsinki Ministerial conference on the protection of forests in Europe</p> <p>FSC Founding Assembly in Toronto (October)</p> <p>Leading German publishers sign a "letter of intent" criticising clearcuts and saying that they will ask their suppliers to make environmental improvements in forestry</p>
1994	<p>AssiDomän formed by partial privatisation of former State forestry operation Domän.</p> <p>New Forestry Act adopted by parliament.</p> <p>WWF-Sweden forms a "reference group" to give advice on the development of forest certification standards in Sweden; Consultants commissioned by WWF-Sweden to examine lessons to be drawn from organic agriculture certification and to look at feasibility of tracing chain-of-custody</p> <p>Several visits to Sweden by members of the WWF-UK 1995 group gave support to WWF's work in discussions with their suppliers</p> <p>Agreement is reached between WWF and the Swedish Society for Nature Conservation to work together on the standards; Anders Lindhe recruited by WWF-Sweden for this task</p>	<p>Sweden joins European Union</p>
1995	<p>WWF and SSNC launch criteria for nature conservation in forests (May)</p>	<p>FSC accredits first four certifiers</p>

Table 6.4 *Continued*

Year	National events	International events relevant for the development of certification in Sweden
1996	<p>Swedish FSC working group established with NGOs, labour, church, forest industry and forest owners as members</p> <p>Nordic Forest Certification project initiated by forest owners and industry in Finland, Sweden and Norway</p> <p>Stora has one of its forest districts certified (300 000 ha) using a standard developed by Scientific Certification Systems based on the FSC Principles and Criteria and input from the Swedish FSC working group</p>	
1997	<p>Private forest owners leave FSC group (May)</p> <p>Group is reformed (May) and finalises standard (June); Certification using standard begins pending approval by FSC board</p> <p>Swedish FSC Advisory Board created to replace the working group (November)</p>	Finnish Forest Certification standard published (April)
1998	Standard approved by FSC board, by this time 2.7 million ha of forests owned by AssiDomän, Korsnäs and Stora had been certified (January)	

Sources: Interviews; minutes of FSC working group meetings

6.5.2 Agenda Setting

The agenda setting period in Sweden can be considered to have begun in 1992 with the initiation of the FSC feasibility study of forest certification carried out by Per Rosenberg of WWF-Sweden. It ended in 1994 when WWF-Sweden and the Swedish Society for Nature Conservation agreed to work together on developing certification standards.

Although the agenda setting period in Sweden coincided with that in Canada, the situation differed in two respects. First, in Sweden there was no equivalent of the Canadian government commitment to certification in the National Forest Strategy. In Sweden, the National Board of Forestry did not take a proactive stance on certification. Second, by the early 1990s a number of members of the Swedish Forest Industries Association began to see the need for a “communications platform”, which would provide objective information about the environmental performance of industry in a way which could be

supported by NGOs. It will be recalled that the Canadian National Forest Strategy made no mention of NGO involvement in certification.

In October 1992, the Swedish Forest Industries Association,⁷⁴ together with the private forest owners, the church and trade union representatives, launched a “Declaration of Intent” in which it made a commitment to environmentally sensitive forest practices, and expressed support for the establishment of more nature reserves (SPPA 1992).

Several senior officials of forestry companies interviewed for this thesis confirmed this, and stated that there were four main reasons for establishing such a platform. First, since the mid-1980s the influence of environmental groups both in Sweden and internationally had grown. Greenpeace had already put the industry under

⁷⁴ At that time called the Swedish Pulp and Paper Association.

significant pressure in the 1980s over the use of chlorine for bleaching pulp. It was beginning to realise after UNCED in June 1992, that forest management was going to be the next topical issue, and that Swedish NGOs would work with international NGOs to put it under pressure both at home and in its export markets. Second, the industry was aware that the 1979 Forestry Act was so production-oriented that it was increasingly subject to criticism in Sweden on environmental grounds. This would make it difficult for industry to defend its practices as being in compliance with the law, if the law itself was not credible from an environmental viewpoint. Third, several companies, led by AssiDomän and Stora, were beginning to hire forest ecologists and look into ecological landscape planning. This was influenced by the “A Richer Forest” programme launched by the National Board of Forestry in 1990, which was aimed at training private forest owners to integrate environmental considerations in forest management (Ekelund and Dahlin 1997). Finally, as shown in Table 6.3, companies also felt that they had made many improvements in their practices since the 1970s and were keen to be able to communicate these to the public and their customers in a credible manner.

Several leading figures in the forest industry seem to have quickly realised that forest certification could provide the “communications platform” they had been seeking. Research for this thesis confirmed Rosenberg’s findings (P. Rosenberg, personal communication, January 1998) that by 1993 AssiDomän (which had just been privatised), Stora and Korsnäs had taken a leading position within the forest industry in support of certification.

On the other hand, MoDo and SCA were more reticent. Differences in the attitudes of forest companies to certification cannot be explained in terms of their self-sufficiency in wood,⁷⁵ as Stora has the least self-sufficiency and AssiDomän the most (Morgan Stanley 1998a). Similarly, the attitudes cannot be explained in terms of geographical location of forest lands or in terms of differences in the export markets companies focus on. Finally, it is not even clear that the environmental performance of companies that

were reticent about certification was lower than those favourable to it. For example SCA was the first company to publish an environmental policy in 1987 (SCA 1987) and by 1992 was active in ecological landscape planning (SCA 1996). MoDo had taken a leading role in introducing improved environmental practices in its pulp and paper plants (MoDo 1995).

There appear to be two main reasons for the differences between the companies in their attitudes to certification. First, AssiDomän, Stora and Korsnäs were the only companies in Sweden to supply liquid paperboard to Tetra Pak. Liquid paperboard, used to make drink cartons, is a value-added product. According to forest company officials interviewed it is one of their most profitable product lines. The technology for making liquid paperboard has been developed by these companies in collaboration with Tetra Pak since the 1960s, which means that they have a long-term relationship. Since the late 1980s, Tetra Pak had itself been experiencing pressure from consumers and environmental groups about the environmental impacts of its products. It had suggested to its Swedish suppliers that it would be helpful if they could provide some independently verified information on their forest management which Tetra Pak could use to respond to customers’ concerns (P. Osterlöf, personal communication, April 1998). Although Tetra Pak was not specifically asking for forest certification, it was a tool that could be used to respond to the company’s needs.

The second reason relates to the “corporate culture” within forestry companies. When AssiDomän was privatised it sought to identify itself both internally and externally as a “green” forestry company (AssiDomän 1998) and Stora has taken a similar position. Both companies changed chief executives in the early 1990s, and

⁷⁵ It might have been expected that companies which obtained most of their wood from their own forests would be more favourable to certification, firstly because this was a decision they could make themselves without having to get the agreement of many individual forest owners supplying them, and secondly because it would be easier to track the chain-of-custody and label products if the wood came from their own lands.

have made efforts to improve their relations with NGOs. On the other hand, both MoDo and SCA have the reputation in the industry for being more conservative and less open to outside influences.

Despite the differences in attitudes between companies, the Swedish Forest Industries Association issued a press briefing in December 1993 that was supportive of forest certification (SPPA 1993). The briefing was entitled “Common Goal for Conservationists and Forest Sector: ‘Seal of Approval’ Sought for Good Forestry Practice in Sweden”. It quoted senior forest company officials and forest owner representatives and can be seen as a signal from the Forestry Coalition that it was prepared to move towards the programme development phase. Interestingly, there was no public signal on certification at this time from the National Board of Forestry, probably in part because the Board was fully occupied with the revision of the 1979 Forestry Act. However, a number of senior officials at the Board informally signalled their support for certification to WWF and SSNC, as well as the intention of the Board to avoid direct involvement in the certification debate (P. Rosenberg, personal communication, January 1998). This tacit support was important in allowing programme development to proceed.

6.5.3 Programme Development

The programme development phase began in 1994 with the creation of a “reference group” by WWF-Sweden to advise on the development of certification standards. It ended in September 1997 with the approval of a certification standard by the Swedish FSC working group.

In 1994, WWF-Sweden decided to move ahead with the development of a standard for forest certification. To assist with this WWF established a small advisory “reference group” consisting of individuals from NGOs, forest owners’ associations, forest companies and County Forestry Boards who had expressed support for FSC during the consultation process (P. Rosenberg, personal communication, January 1998). The initial objective was to finalise the standards in a few months, but this proved to be unrealistic because so few people in Sweden knew what

certification was at the time. Instead, Rosenberg focussed on talking to individuals and groups about certification. It gradually emerged from these discussions that the key issues needing to be addressed in the standards if they were to obtain NGO support included fertilisation, pesticides, the use of exotic species and areas to be set aside from timber harvesting. Meanwhile, several technical studies on the legal framework for certification in Sweden and the feasibility of chain-of-custody tracking at sawmills and paper mills were undertaken. Support for certification was provided by several visits to Sweden of companies in the WWF-UK 1995 Group which purchased wood products from Sweden.

By the end of 1994, it became clear to WWF-Sweden that it could not continue to take the lead on this project alone and that broader technical and political support was needed. Accordingly, an agreement was negotiated with the Swedish Society for Nature Conservation (SSNC) to continue the process as a joint project. Work on the standard continued with a focus on biodiversity issues, and the hope was to get some of the more “progressive” forestry companies to agree to the standard.

However there were occasional divergences between WWF and SSNC on tactics. SSNC preferred to “make a deal” with several of the more progressive forestry companies whereas WWF wished to get all the companies to agree to the standard and was prepared to accept compromises to achieve this. These divergences occasionally became public, for example, when SSNC criticised SCA and Södra as “Taiga Terminators” for logging old-growth forests, a journalist reported that “SSNC is driving its forest partners crazy” (Miljörapporten 1995a).

According to interviews with WWF-Sweden and SSNC staff, an important meeting was held in March 1995 between the two NGOs, the Federation of Forest Owners and forest industry representatives. The purpose of the meeting was to discuss the draft standards, but the forest owners’ representatives apparently stated that they would not be able to submit comments until the end of the year, despite the fact that the National Federation of Forest

Owners had announced in February that it was “basically positive” to certification (LL 1995). Meanwhile it emerged that the forest industry representatives had a set of their own comments on the standards which they had tried to draft together with forest owners representatives, but it had not been possible to reach consensus. In consequence, the comments were not tabled at the meeting. In response to this situation, the NGOs announced that they would unilaterally make the criteria public at an international forest conference organised by WWF in Stockholm on 23 May 1995.

This happened as announced. The standards, referred to as “Preliminary Criteria for Environmental Certification of Swedish Forestry” (SSNC/WWF 1995), focussed on biodiversity conservation. They were intended to provide detailed interpretation of FSC Principle 6 on biodiversity conservation in Sweden. Key components were a provision for the protection of at least 5% of forest holdings, protection of deciduous-dominated stands, a ban on the use of pesticides, herbicides and exotic species, and recognition of the importance of the Sami. The NGOs were not successful in their efforts to get support for the standards from some companies, and the forest industry maintained a united front in public.

The Swedish Forest Industries Association’s response was to welcome the criteria as a “valuable contribution” but, also together with the forest owners, to announce the launch of a counterproposal on the same day. The Nordic Forest Certification (NFC) project was announced on 23 May (SFIA 1995). The project was started by representatives of forest owners and industry from Sweden, Finland and Norway with the following objective:

to investigate the prospects of concerted Nordic action on forest certification. The aim was to identify areas where more development was needed and to propose a framework for continued collaboration, paying particular attention to the role of private forestry in the Nordic countries (NFC 1996).

WWF and SSNC saw the project as an attempt by the industry and forest owners to delay progress on certification in Sweden, and to lower the certification standards. Accordingly, they did not respond to invitations to participate in the NFC project. They also convinced their counterparts in Norway and Finland to boycott NFC meetings. Partly due to lack of NGO support and partly because of different situations in the three countries, the project was not successful in focussing Nordic attention on forest certification. Its main function became information sharing, and it appears to have had little impact on the development of forest certification in Sweden.

In November 1995, WWF and SSNC formed a “preliminary” FSC working group in Sweden. Membership was made conditional on a written declaration of support for the Forest Stewardship Council Principles and Criteria (FSC P&C), and a commitment to working constructively to prepare certification standards for Sweden within the FSC framework. At that time neither the forest owners nor the forest industry agreed to these requirements, so they did not join the group, which was made up of NGOs (WWF, SSNC, Friends of the Earth and Greenpeace), the Church and Skogssällskapet (the Forestry Society). A major effort was made by participants to get other actors to join the working group. This gradually produced results with companies like IKEA and Kinnarps (office furniture manufacturer), the Swedish Sami Association and labour union representatives joining the group. In addition, a “stakeholder group” of organisations, which expressed general support for FSC was set up to play an advisory and communications role. By the end of the process, 90 organisations were represented in the stakeholder group (SWG 1997a).

In January 1996 the forestry companies collectively decided to join the working group under strong pressure from AssiDomän⁷⁶ and Korsnäs, who had indicated that they would be prepared to join the group without the other companies, if necessary

⁷⁶ Since January 1995, AssiDomän had been testing systems for tracking wood from the forest to and through a pulp mill, in collaboration with IKEA (Miljörapporten 1995b)

(DN 1995). This decision placed the forest owners in a difficult situation and by February they finally agreed to participate in the working group. The group was formally constituted on 15 February 1996.

It included representatives of the following actors (Johansson 1996):

- NGOs;
- forestry companies;
- forest owners;
- labour unions (forest workers and wood workers);
- Sami;
- youth organisations;
- retailers; and
- furniture manufacturers.

The working group was made up of six environmental representatives (NGOs and the youth organisation), six economic representatives (forest industry, forest owners and a retailer) and three social representatives (two from labour unions and one from the Sami). The working group gave itself the task of developing a FSC-compatible standard for forest certification in Sweden. The group was chaired by Dr Lars Eric Liljelund, senior advisor to the Minister of the Environment who was seconded for this purpose. A secretariat was established in the Swedish Forestry Association, funded by voluntary contributions from working group members.

The National Board of Forestry could not be represented on the working group because FSC regulations do not allow government participation in FSC working groups. However staff from the Board participated in several subgroups. Also, the Board signalled its support for certification on several occasions during the process. Staff from the National Board of Forestry, interviewed during research for this thesis, stated that as certification was a voluntary market instrument there was no need for them to participate in standards development, as long as these standards were not in contradiction to the forest legislation and regulations.

No university or research institute scientists joined the working group either, although several participated in the subgroups. The reason given for this by the secretary of the working group was that the group did not consider scientists to represent an “interest group”, but rather to be experts on a particular subject. The members of the working group had to vote for or against the whole standard (after consulting their organisations), not just the parts they had an interest in. The working group considered that this was not appropriate for scientists, firstly because it was not clear whom they would consult and, secondly because a mycologist, for example, would probably be unwilling to vote on an issue concerning economics (P. Stenmark, personal communication, February 1998).

It was agreed that all decisions of the working group would be taken by consensus (SWG 1996), although this term was not defined. In practice it was interpreted to mean unanimity. If unanimity could not be achieved, it was agreed to refer the issue back to the stakeholder group for advice. Five sub-groups were established to do preparatory work on the development of standards, with the following tasks:

Applications subgroup: examination of mechanisms needed for the implementation of the standards;

Market subgroup: preparation of proposals for labelling and marketing certified products;

Environmental and identification of issues and options for

Biodiversity subgroup: inclusion in standard in these areas;

Social subgroup: identification of issues and options for inclusion in standard in these areas; and

Production and Economics subgroup: estimation of the economic effects of the proposals from other sub-groups.

The subgroups included outside experts who were not members of the working group. As drafts were prepared on various issues, they were circulated to the stakeholder groups and other interested parties for comments. In addition, both the working group and the subgroups held meetings to explain progress and seek inputs.

At an early stage, the working group decided that the standards would have to comply with the following criteria (SWG 1996):

- compatibility with the FSC P&C;
- all significant issues identified by the working group satisfactorily addressed;
- the wording of the standards is clear and unambiguous; and
- the standards to be easy for companies and forest owners to use.

Significant issues were referred to by the working group as “fields” (Table 6.5). Once a field was identified by a subgroup, a member of this group was made responsible for collecting relevant information and preparing options for text

to be included in the standard. The production and economics subgroup concentrated on evaluating the economic impacts of proposals from the other subgroups.

By the end of September 1997, when the Swedish standard was formally submitted to the Forest Stewardship Council for approval, a total of 95 formal meetings had been held under the auspices of the working group, including 21 meetings of the working group itself (SWG 1997a). Minutes of only these 21 working group meetings are publicly available, and these were translated and analysed in the course of research for this thesis.

The minutes show that the agenda of the working group was largely set by the NGOs. There is a close correlation between the fields listed in Table 6.5, and the contents of the SSNC/WWF “Preliminary Criteria” launched in May 1995 (SSNC/WWF 1995). All of the issues covered in the “Preliminary Criteria” are included in the list of fields. Labour union representatives and the Swedish Sami Association both introduced their own specific issues as well. For union representatives, workers’ rights were the key issue,

Table 6.5 “Fields” Identified by Subgroups of the Swedish FSC Working Group

Environmental and Biodiversity subgroup	Social subgroup	Applications subgroup
Deciduous stands	Workers’ rights	Group certification for private forest owners
Dead wood	Workers’ training	Chain-of-custody
Fire	Local communities	Labelling of products not made from 100% certified wood
Valuable biotopes	Rights of indigenous communities	Structure of the standard
Montane areas	Outdoor recreation activities	Relation of certification to sustainable forest management
Old or large trees	Best available technology	Methodologies for identifying key habitats and other nature values
Traditional cultivated landscapes		
Plantations		
Soil scarification		
Tree genetics		
Fertilisation		
Pesticides and herbicides		
Landscape ecology		
Roads		
Wetlands and streams		
Biofuel		
Conservation of historic sites		
Forest edges and other areas requiring special management		

Source: SWG (1996)

particularly the extension of collective bargaining agreements with forest companies to cover logging contractors. For the Sami representative, the issue of reindeer grazing rights in privately owned forests was paramount.

According to the minutes of the working group meetings and interviews carried out for this thesis, forestry company representatives in the working group did not oppose the Sami demands, because all the companies had previously negotiated arrangements with Sami in their areas. In reality, the Sami demands were mainly directed at private forest owners in the north of Sweden with whom they have sometimes had conflicting relationships. Forestry company representatives were initially concerned that labour union representatives in the working group would use it as a forum to renegotiate collective agreements that had been previously negotiated bilaterally in other fora. The unions may have had this intention initially, but if so, faced with the opposition of the forest companies, they did not pursue the issue.

Once the companies realised that the main goal of the unions was an extension of the benefits already negotiated under collective bargaining agreements by the employees of contractors working for private forest owners, they had little reason to oppose the demands of union representatives.

To the surprise of some of the NGO representatives, the forestry companies did not even systematically oppose NGO positions on the environmental and biodiversity fields. The position of the industry representatives was that any provisions in the standards should be based on scientific data. In the absence of clear information showing that a particular practice had an impact on biodiversity, the standards should include provisions for further research on the matter. After some hesitation, the NGOs gradually came to agree with this approach.

A surprising level of agreement between NGO and industry representatives was reached fairly rapidly about most of the individual fields. This appears to have been facilitated by several factors. First, the environmental performance of the industry had improved substantially since the

1970s (see Table 6.3) and NGOs recognised this, at least in private. NGOs, therefore, had some confidence that forestry companies could improve their performance, and forestry companies accepted that NGOs were technically capable of identifying real issues in the context of biodiversity conservation. Secondly, both sides accepted that biodiversity conservation was the central issue and that forestry practices needed to be further modified in this regard. Some of the NGO representatives were also recognised by industry as competent biologists and had previously been involved in training courses for forestry company staff and in field studies of ecological landscape planning.⁷⁷ Similarly, some of the forest company representatives were accepted by NGOs as credible professional forest ecologists. Thus, within the working group, an “epistemic community” of forest biodiversity specialists cutting across NGO/forest company boundaries existed. This appears to have formed a solid basis for policy learning and reaching compromises on the environmental and biodiversity fields.

There appears to have been quite a lot of mutual support between NGOs, labour and Sami representatives, for several reasons. The three groups of actors rapidly realised that there was no conflict between their objectives and that they would be in a stronger position if they presented a united front. Indeed on some specific issues, such as reindeer grazing, the Sami and NGOs both supported the protection of old-growth forests, albeit for different reasons. The NGOs also realised that they needed the support of the other actors if a FSC-compatible standard addressing social as well as environmental issues was to be prepared. In addition, both the Sami and the NGOs were able to profit from the unions’ greater experience in negotiations.

⁷⁷ The field studies of ecological landscape planning carried out by AssiDomän and Stora were important fora for policy learning in this regard because the companies set up advisory reference groups made up of scientists, NGOs and local naturalists who were fully involved in the tests.

The consequence of this situation was that by the end of 1996 the forest owners' representatives gradually became isolated in the working group. They eventually had to react to proposals from the Sami, labour unions and NGOs, with little support from their traditional allies, the forestry companies. Their response was to argue that certification was going to be difficult for individual forest owners to implement because of their small scale of operation. They called on the working group to develop models for group certification of forest owners. Initially, there were no major conflicts because the forest owners were represented in the working group by an official from Södra – the only association to have its own industrial facilities, and so the only one to be directly exposed to international market pressures. Swedish NGOs consider it to be the most environmentally progressive association because of its TCF pulp mill and the “green management plans” it develops for its members. In addition Södra is not faced with the reindeer-grazing problem because its members forests are south of areas inhabited by reindeer. Södra members' forests are more productive than those in the north, and their economic situation is generally more favourable in consequence. The NGOs probably realised that if they could reach an agreement with any forest owners' association it would be Södra, which gave them an incentive not to alienate the Södra representative, particularly as they viewed him as genuinely committed to reaching an agreement.

However, as Södra consulted with other regional forest owners' associations, they realised that it was going to be very difficult to reach an agreement with Norrskog (the northern forest owners' association), particularly on reindeer grazing and protection of key biotopes. In consequence, the forest owners' representatives withdrew from the working group in May 1997. This decision was also influenced by developments on certification in Finland. In April 1997, the Finnish Working Group on Sustainable Forest Management Certification Standards⁷⁸ produced a set of standards which were seen by

Swedish forest owners as representing a lower standard of performance than the draft Swedish FSC standards. This led them to question FSC's ability to harmonise standards in different countries to avoid inequalities. The forest owners' representatives also cited problems concerning the proposed systems for group certification and chain-of-custody tracking. In addition, Södra was concerned that the provisions in the draft standards concerning setting aside areas for forests would require forest owners to reduce harvest levels by more than 10%, over and above the 3% to 4% reduction in potential harvest levels required by the 1994 Forestry Act. Södra was concerned that the total reductions for its own members might be even higher (up to 16%) because of other requirements for the protection of deciduous forests-which are only found in southern Sweden (Södra 1997a).

After the forest owners left the FSC working group a new working group was constituted with all the other actors still present. In the absence of the forest owners, consensus was reached by 18 June 1997. While the absence of the private forest owners clearly made it easier for the remaining participants to reach consensus, a number of issues still divided working group members. The most important of these were restrictions on planting exotic tree species (*Pinus contorta*). This was a difficult issue for SCA, which in the past had planted significant areas with this species. Even though only small areas were being planted in 1997, the company did not want to rule it out as an option for the future. In the final days leading up to the agreement, and even

⁷⁸ The Finnish working group was set up in summer 1996 on the initiative of the Finnish Central Union of Agricultural Producers and Forest Owners (MTK), the forest industry, WWF-Finland and the Finnish Association of Nature Conservation. The intention was to produce standards for forest certification that would be compatible with the FSC, ISO 14001 or EMAS and EU requirements (Simula 1997). The WWF-Finland representative in the working group was also the FSC contact person for Finland and his apparent endorsement of the document (which was later denied by WWF-Finland) gave the impression of FSC and NGO agreement to the standard.

in the final hours of 18 June, there was a series of rounds of last-minute lobbying on all sides. The Swedish Forest Industries Association, believing that SCA would not be able to compromise on this issue was even ready to conclude that consensus could not be reached on the standards. The Federation was however put under heavy pressure by AssiDomän, who indicated that it was prepared to agree to the standard even if no other company did. Finally, a compromise was found that satisfied all participants except Greenpeace, which was opposed in principle to exotic species and fertilisation and therefore found itself unable to support the standard.

After circulating the standard for comment to interested parties, the working group made some 20 relatively minor changes and submitted it for approval to the FSC in September 1997. It was approved in January 1998 as the first FSC national standard (FSC 1998b).

Participation was a less controversial issue in the Swedish process than in Canada because there was no dispute that the structure, composition and decision-making procedures of the original working group founded in February 1996 allowed all the actors in the Swedish forest policy domain to participate in the process. The need to have a balanced matrix of actors in the policy domain was not as great as in Canada because decisions were taken on the basis of unanimity rather than by majority vote. However, until the private forest owners' representatives left the group in April 1997, there does appear to have been a consensus both within the group and more generally in the policy domain that the group's membership was balanced.

The gradual isolation of the forest owners can be explained by a number of factors. First, when Sweden joined the EU in 1994 the previous arrangements under which prices for wood were negotiated between forest owners' associations and industry had to be abandoned because of EU competition directives. Second, since the early 1990s forest companies had engaged in ecological landscape planning and other activities to improve their environmental

performance. The main companies had also hired forest ecologists in senior positions, and had many of their foresters trained in forest conservation (sometimes by NGO staff). Partly because of the difficulty of coordinating decisions among forest owners, and partly because they were less directly exposed to international market pressures, forest owners' associations had not progressed as far as the companies on these issues. The only association to have a forest ecologist in a senior position was Södra. This meant that forest companies were in a better position to implement environmental improvements proposed by NGOs. The framework of landscape ecology was with which NGOs, academics and forest companies were all comfortable by the mid-1990s. However, because of issues of scale of operation, it was much harder for forest owners' associations to use this framework.

A third factor is the geographical location of the majority of private forests in central and southern Sweden, where the protected area system is weakest and the broadleaved forests are to be found. This meant that the forest owners were concerned that a disproportionate amount of the burden for protection of key biotopes and broadleaved forests would fall on them (Södra 1997b).

A fourth consideration is the seemingly intractable conflicts between some forest owners in the north and the Sami. Although this is not an issue for the majority of private forest owners in Sweden, solidarity between regional associations proved strong enough for a united front to be maintained on this issue. Another social concern was the extension of the provisions for collective bargaining agreements to subcontractors working on private lands. It is interesting to note that on these two issues the forest industry's performance was better than that of the private forest owners in the view of the Sami and the labour unions. For example, the forest companies affected by reindeer grazing have all set up consultative mechanisms with the Sami, which appear to function well.

Finally, in retrospect it does appear that the leaders of the forest owners' associations made an incorrect political assessment that certification would not proceed without their support. Once it emerged that this was not correct, they had no clear fallback position and tended to find reasons to criticise certification to justify their position.

It should be noted that in Sweden (as in Canada) there is little provision for participation during the implementation of the standard. The one exception is the requirement for the Sami and private forest owners to consult on reindeer grazing. The implementation of the standard is left to the forest owners and certifiers. It remains to be seen whether this will prove satisfactory to actors in the domain who have been heavily involved in standard development.

6.5.4 Overview of the Swedish Standard

The Swedish FSC Standard for Forest Certification has six sections (SWG 1997b):

1. Introduction;
2. Basic requirements (compliance with national laws and FSC principles);
3. Social standards (workers rights, Sami rights, local communities' interests);
4. Montane forests (special protection measures);
5. Environment and biodiversity issues; and
6. Production and economics standards (commitment to multiple use and timber production).

Accompanying the standard are a set of appendices (SWG 1997c):

1. Guidelines for the assessment of biodiversity values;
2. Contents of management plans and other documentation;
3. FSC certification of private forest owners and other small landowners;
4. FSC certification of companies and other major land holdings;

5. Statement regarding FSC in relation to ISO and the European Eco-Management and Audit Scheme (EMAS);
6. ILO conventions and recommendations;
7. Glossary; and
8. The Swedish Forestry Act (1994).

The objectives of certification are defined in the standard as:

to manage and use forest and forest lands in forms that:

maintain, and where necessary regenerate the ecosystem's production capacity, fundamental ecological processes and biodiversity;

secure people's livelihoods, promote a safer working environment, respect the cultures of, respectively the local population and the Sami people and their time-honoured rights, and attach due importance to values such as wildlife, fungi, berries, fish and recreation; and

promote long-term valuable wood production and good economic profitability (SWG 1997b: 4).

It should be noted that these objectives are very similar to those of the 1993 Swedish Forest Policy (set out in Section 6.2.4). The differences are the explicit mention in the standards of people's livelihoods and Sami rights and the reference to regeneration of ecological processes and biodiversity.

The standard specifies that the landowner (whether private forest owner or forestry company) must make the following commitments to be certified:

1. fulfil the requirements in the standard unless directed otherwise by legislation;
2. accept verification of this by an accredited certification body;
3. if the standard is revised, the revisions must be implemented by the landowner within a year;
4. finalise all planning documents such as management plans within five years after certification; and

5. implement and document biodiversity assessments in accordance with guidelines developed by the FSC working group pending the inclusion of such guidelines in the standard.

Unlike in Canada, there was no controversy in the working group concerning the differences between certification using performance standards and management systems. This was partly because several of the forest companies intended to seek certification under both FSC and ISO 14001. Another reason is that the forest companies seem to have clearly understood that only FSC-based certification would satisfy their ecosensitive customers. The FSC working group took the view that FSC and ISO 14001 were:

independent, complementary and concurrent systems...The certification systems complement each other in the efforts towards sustainable forestry practices (SWG 1997c: 14).

The way a number of forest conservation and social issues are treated in the standard deserves further discussion. Table 6.6 shows how the forest conservation issues initially identified by Fältbiologerna are addressed in the standards.

The information in Table 6.6 suggests two things. First, many of the forest conservation issues covered in the FSC standard were originally raised in the 1973 Fältbiologerna report, although they were treated at the time from an aesthetic rather than a biodiversity perspective. However, neither ecological landscape planning or biodiversity conservation were specifically mentioned in the Fältbiologerna publication. The paradigm shift away from aesthetic considerations to biodiversity is illustrated by the disappearance of mechanisation as an issue, as no direct links could be made between increasing mechanisation and threats to biodiversity.

Second, much of the content of the standard was derived from the SSNC/WWF 1995 criteria. It is not exaggerating to say that NGOs

largely set the agenda for this part of the standard. There are several areas (exotic species, pesticides and fertilisation) where consensus could not be reached and a fact-finding process was set in place. There are several other areas (numbers of residual trees after clearcutting, conifers and monocultures) where the FSC standard is weaker than the SSNC/WWF criteria. However, overall the two documents are remarkably similar. One way in which the FSC standard is actually strengthened in relation to the criteria is in the use of landscape ecology as a reference point. This addition appears to have come partly from the forestry companies, most of which have been actively involved in ecological landscape planning since the early 1990s and partly from the FSC P&C which refer to this issue.

The fact that the forestry companies were able to agree with standards whose content largely originated from NGOs can be explained in only three ways. One possible explanation is that their performance was already in line with these standards so that they had little to worry about. Alternatively they intended to make major improvements in their performance immediately. Another reason could be that they were not aware of the implications of the standard. It is argued in Section 6.6 on programme implementation, that the first explanation is the most convincing one.

Social issues were not really addressed in the 1973 Fältbiologerna work or the SSNC/WWF 1995 criteria. However, because of the FSC framework they had to be addressed in the Swedish standards. Three groups of actors – the Sami, labour and private forest owners – had specific social issues to promote.

The main issue for the Sami was to secure winter grazing for their reindeer herds on private forest lands. The 1971 Reindeer Husbandry Law provides for this in theory but does not delimit the area that may be used by the Sami. As a result there have been a number of court cases and conflicts over grazing in specific areas (SI 1997a). The standard addresses this issue by using as a reference point a map prepared by the County Agricultural Board in 1978, which designates

Table 6.6 Treatment in the 1995 SSNC/WWF Criteria and the 1997 FSC Standards of Forest Conservation Issues Identified by Fältbiologerna

Issue identified by Fältbiologerna in 1973	Status in 1995/96	Treatment in SSNC/WWF 1995 Criteria	Treatment in 1997 FSC Standard
Increase in size and frequency of clearcuts	Average size of clearcuts 5.6 ha in 1996	Clearcuts <i>per se</i> no longer an issue. A number of measures were however proposed to reduce the environmental impacts of harvesting. These are presented separately below.	At least 5% of productive forest to be protected for biodiversity conservation based on ecological landscape planning At least 10 mature trees to be left per hectare after final harvest Dead wood to be protected Forestry should imitate natural disturbance patterns and processes
Increase of conifers at the expense of broadleaves in southern Sweden	Amendment made to 1979 Forestry Act requiring forest owners to manage "Valuable Broadleaved Forests"	Deciduous-dominated forests must occupy at least 5% of productive forest area Deciduous trees should be protected in thinning so that at least 10% of stand biomass consists of deciduous trees at final cutting	Deciduous-dominated stands must occupy a minimum of 5% of the area of stands naturally dominated by broadleaves
Increased use of herbicides	Reduction since the 1970s	Banned	Banned
Use of pesticides	DDT banned, insecticide use reduced	Banned	Banned with the exception of Permethrin which can be used for root treatment of seedlings in nurseries until a definite decision is taken by FSC in Sweden by the end of 1999 on the basis of an Environmental Impact Assessment. ⁷⁹

⁷⁹ By the end of 2000 no final decision had been taken on this issue.

Table 6.6 Continued

Issue identified by Fältbiologerna in 1973	Status in 1995/96	Treatment in SSNC/WWF 1995 Criteria	Treatment in 1997 FSC Standard
Increased use of fertilisers	Reduction in use since 1970s	Fertilisation must not lead to significant changes in long-term nutritional balance of soil, or to significant leaching into lakes and watercourses	Landowners who fertilise with nitrogen must be able to show by 2002, with the support of comprehensive documentation, that the natural processes in forest soils and other ecosystems, and biodiversity, are protected.
Increased use of exotic species	Reduction in use of <i>Pinus contorta</i> since the 1970s	Banned	An Environmental Impact Assessment on the use of exotic species will be completed by FSC in Sweden by 1 January 1999 and a consensus decision will be taken on this issue. ⁸⁰ Until then no planting unless there is consensus on this in the FSC Advisory Board in Sweden
Increased use of scarification	Slight reduction since 1970s	Scarification to be restricted to areas where it is necessary to ensure good reforestation	Soil scarification to be limited to sites where it is necessary to ensure good regeneration
Expansion of areas under drainage	Major reduction of drainage since 1970s	No new drainage	No new drainage on previously undrained land.
Increased use of monocultures	Only 15 700 ha of monocultures in Swedish forestry in 1995	No afforestation with conifers All logged areas to be reforested with indigenous species Natural regeneration to be used where appropriate	No afforestation with conifers on former farmland which has biodiversity values. Natural regeneration to be used when appropriate

⁸⁰ By the end of 2000 no final decision had been taken on this issue either.

Table 6.6 *Continued*

Issue identified by Fältbiologerna in 1973	Status in 1995/96	Treatment in SSNC/WWF 1995 Criteria	Treatment in 1997 FSC Standard
Increasing mechanisation of forest industry	Most final fellings carried out by machines	Not addressed	Not addressed
Logging in mountain forests	4 million ha of mountain forests set aside since 1990	No logging in non-productive forests Logging in non-fragmented mountain forest areas (as defined by SSNC) banned, apart from landowners with less than 1000 ha who can log selectively. Special care for lichen-rich areas	No logging in virgin forest areas Logging permitted in other mountain forests with biodiversity values as long as felling is selective and lichens are protected for reindeer grazing

Sources: Olssen and Olssen (1973) ; SSNC/WWF (1995); SOS (1997); SWG (1997b,c)

New Issue	Treatment in SSNC/WWF 1995 Criteria	Treatment in 1997 FSC Standard
Impact of forest management on biodiversity	At least 5% of productive forest area to be protected for biodiversity conservation At least 20 mature trees to be left per hectare after final harvest Dead wood to be protected	At least 5% of productive forest to be protected for biodiversity conservation based on ecological landscape planning At least 10 mature trees to be left per hectare after final harvest Dead wood to be protected Forestry should imitate natural disturbance patterns and processes

most of northern Sweden as being customarily used by the Sami. The standard also provides for consultations between the Sami and private forest owners and requires forest owners to protect arboreal lichens, which are the reindeer's main winter food. According to the Sami representative in the working group (O.T. Johansson, personal communication, April 1998) these provisions entirely satisfied the Swedish Sami Association. He, and other working group members who were interviewed, attributed the Sami's success in this matter to three factors. First, the Sami representative consistently focussed on this one

issue that was important to them. Second, they were supported by the NGOs; and third, FSC P&C accord considerable importance to indigenous people's rights so the Sami were in a strong position to argue their case. Of course, the success of the Sami meant that forest owners, particularly in the north of Sweden, opposed the standard because they felt that on this point the text was biased against them.

Labour union representatives had a similarly narrow agenda: to ensure that the provisions for salaries, insurance and working conditions, which were periodically negotiated with the forest

companies under collective bargaining agreements, also be applied to subcontractors doing forest operations for private forest owners. Like the Sami they were successful on this, for the same reasons. Again, the private forest owners saw this in part as a decision against their interests.

In addition to the Sami and labour issues, private forest owners expressed concerns about the costs and feasibility of certification, arguing that economies of scale would make it much easier for forest companies to be certified than private forest owners. The working group sought to address these concerns by several measures. First, all forest owners have five years in which to develop a management plan after being certified, and the documentation requirements are less demanding for owners managing less than 5000 ha of productive forest land. Second, a few of the provisions of the standard (e.g., prescribed burning) do not apply to private forest owners. Third, an appendix to the standard proposes a mechanism for “group certification” of a number of private forest owners (SWG 1997c). However, as discussed above, these provisions were not considered to be satisfactory by private forest owners’ representatives and they left the FSC working group in April 1997. The situation of private forest owners is one of the key issues further discussed in the following sections.

6.6 PROGRAMME IMPLEMENTATION

Once the Swedish standard was finalised in September 1997, certification of forest company lands proceeded rapidly. By January 1998 Stora, AssiDomän and Korsnäs together had a total of six forest districts covering 2.7 million ha certified (FSC 1998c), and by June 1998 this figure increased to over 4 million ha (FSC 1998a) and all forest companies in Sweden were in the process of seeking certification.

At a press conference in London on 30 June 1998, Dr Lennart Ahlgren, President and CEO of AssiDomän, announced that all of the company’s productive forest lands (3.3 million ha) had now been certified, and that AssiDomän was selling

FSC-labelled pulp and sawnwood, after chain-of-custody certification of all of its sawmills and one pulp mill. He described FSC certification as “a licence for business” and stated the benefits for AssiDomän included higher prices,⁸¹ market access and improved corporate image. By November 1997, AssiDomän had announced the first shipment of certified Swedish timber to the UK, 43 cubic metres of sawn softwood sold to the Homebase “Do-it-Yourself” chain, via Masons Timber Products (TTJ 1997). AssiDomän’s logo was displayed in Homebase shops and, according to AssiDomän, this was part of a corporate strategy to use certification to obtain “brand recognition” of the company as “environmentally friendly” (M. Eliasson, personal communication, March 1998).

No figures are available on the costs of certification to AssiDomän but the company’s foresters have estimated that implementation of the FSC standard has caused them to reduce harvesting levels by an average of 11% to 12%. Surprisingly, AssiDomän found little difference in the harvest reduction between its land holdings in northern and southern Sweden. In northern Sweden the standard required significant areas of key biotopes to be protected, whereas harvests were reduced in southern Sweden because of the need to protect broadleaved forests. These different measures had similar impacts on harvest levels (O. Johansson, personal communication, March 1998).

It should be noted that AssiDomän was in a particularly favourable position to sell labelled products because of its high level of self-sufficiency in wood (85%). Stora, with only 25% of self-sufficiency, would be unlikely to be able to sell any labelled fibre products even if all its

⁸¹ According to Mr Mikael Eliasson, Director of Strategic Planning and Business Development for AssiDomän Forest and Timber, the company is obtaining a price premium of approximately 5% for certified pulp and sawnwood, in Germany and the UK respectively. It appears that market demand for certified timber has allowed the company to obtain this premium, but the company is uncertain about future price prospects as more certified products from Sweden appear on the market (M. Eliasson, personal communication, March 1998).

forests were certified, although the company was able to sell labelled timber. Pending moves on certification by the private forest owners who provide the bulk of its wood supply, Stora was proceeding to have all of its forest lands certified and will communicate this via advertising, etc., rather than through product labelling (B. Hagglund, personal communication, April 1998). Just as AssiDomän, Stora and Korsnäs were more positive about certification in the FSC working group than MoDo, SCA and Grange, they have been more active in having their forest lands certified as well. Indeed, initially SCA took the view that while they supported the FSC standard, they would not get certified until their customers requested it (P. Persson, personal communication, April 1998). By June 1998, apparently responding to pressure from customers in the UK, SCA announced that it too would seek certification. Most companies will also seek certification of their environmental management systems (EMS) under ISO 14001 or the European Eco-Management and Audit Scheme (EMAS).

Forest owners' associations responded in two ways in the programme implementation phase. First, the Federation of Forest Owners' Associations took a critical position in the media on FSC in general, and the Swedish standard in particular (e.g., Skogen 1997). The main criticisms were that the standard discriminated against private forest owners and that FSC did not have adequate mechanisms to harmonise standards between countries. The federation lobbied timber buyers such as IKEA and forest owners including the Church not to give exclusive support to FSC certification, but rather remain open to other options such as EMAS (R. Johnson, personal communication, February 1998; P. Larsson, personal communication, April 1998).

The second response was at the level of individual associations. Several began developing their own standards for forest certification and applying them within an EMAS framework. Södra took the lead in this respect and, in March 1998, published a certification standard for use by its members (Södra 1998).

The standard did not address social issues, nor did it provide for a product label. However, the environmental provisions had many similarities to the FSC standard, although no definite percentage of productive forest was to be set aside for biodiversity conservation. Preliminary calculations by AssiDomän foresters on the impact on harvest levels of applying the Södra standard suggested that the reduction would be of the order of 10% compared to 11% for the FSC standard (O. Johansson, personal communication, March 1998).

While the forest owners' associations were arguing that certification using the FSC standard was going to be difficult for private forest owners, the Forestry Society (Skogssällskapet), seeing a market opportunity, moved towards offering a group certification service. In April 1998, the Society announced that it had been able to certify a group of more than 50 forest owners covering a total of 90 000 ha using the FSC standard. Most of the holdings were above-average size for Sweden, but the smallest was only 27 ha, showing that it was possible for small private forest owners to obtain certification, although the costs involved were not specified (WWF-Sweden 1998). Subsequently, it was announced in the press that a 175 ha privately owned forest had been certified by the Society in the summer of 1998 for a cost of US\$2 per hectare (LL 1998).

The apparently minor differences in impacts on harvesting levels between the Södra and FSC standards, and the fact that some private forest owners are being certified under the FSC system, tends to weaken the arguments of the forest owners' associations against FSC. The development by Södra of its own standards and their use in conjunction with EMAS may be sufficient to satisfy its customers. The situation is, however, likely to be more difficult for other forest owners' associations whose members sell to forest companies. In this case the pressure on individual owners from the companies – who are their clients – to agree to certification may be greater, especially if the companies were to offer

to set up group certification schemes. Unless these companies can obtain access to enough certified wood, they may be unable to use the FSC logo on their products, even if all their own forests are certified. Ultimately, of course, the choice about whether to seek certification will be made by individual private forest owners. This decision will be based on an assessment of the costs and benefits involved. These costs and benefits are not only financial. There are also trade-offs between solidarity with other forest owners and the desire to maintain commercial relationships with forest companies who are their main clients for wood. What the companies can offer in terms of incentives to forest owners will depend on demand in Sweden's export markets.

It is too early to speculate on the decisions of thousands of individual forest owners, but preliminary indications from wood buyers employed by companies visited during research for this thesis were that there was increasing interest in certification from private forest owners, particularly if the companies could provide assistance with costs and logistics. As noted in Section 6.4, it is assumed in corporatism that "interest associations" have a monopoly on representation in their particular area. This suggests that forest owners' associations (which represent only 26% of the country's private forest owners and have had their economic role weakened because of EU competition directives) will not be able to afford to take a passive stance if their members start to accept certification through the Forest Society (which could emerge as a powerful competitor to them) under pressure from forest companies. If this scenario begins to unfold, we can predict a change in policy initially from Södra, and eventually from the other associations as well.

The early stages of programme implementation have seen a high level of NGO support for certification. Even though Greenpeace did not ultimately support the standard because it did not ban the use of exotic species and fertilisers, the organisation has not criticised companies for seeking certification. Similarly, after visiting a

certified AssiDomän forest, two experienced SSNC forest campaigners concluded:

But was it that easy to switch to environmentally sound forestry? No. Assi did not make a revolutionary change of the daily work in the forest. It does not mean the requirements are set too low, rather Assi was already far ahead when the national standard was agreed upon. But it may require more effort in the long-term (Stove and Lundqvist, cited in Och and Ottoson 1998: 13; translated from the Swedish original).

Over the longer term the high level of support may begin to weaken, particularly in SSNC, whose local organisations will probably eventually observe violations of the standard or other problems in certified forests, because no forestry operation is free from mistakes.

In addition, certification, which currently appears as a major success for the Swedish NGOs, may eventually weaken their position for two reasons. First, they have no role in the implementation of the standard so the traditional role of NGOs as watchdogs of industry is to be taken over by certifiers who will report on problems to the companies and FSC, not to the public. Second, a "niche" in the NGO movement may be opened up for more radical groups who could either argue that the standard is too low since most of industry seems to be able to comply with it, or carry out their own field evaluations of certified company forests using the standard and highlight any inconsistencies. If such NGOs, possibly with the support of Greenpeace, called for substantial strengthening of the standard, it would put WWF and SSNC in particular in the potentially difficult situation of either appearing to be "weak on industry" or, if they change their position, of being unreliable.

Neither the labour unions nor the Sami have been active in the programme implementation phase as yet, apart from expressing support for the standard. The two reasons given for this by

representatives of both organisations interviewed for this thesis were that they got what they wanted in the standard, and that for the first time they were treated as full participants in forest policy debates (O.T. Johansson, personal communication, April 1998; G. Karlsson, personal communication, February 1998).

The Swedish Lutheran Church was represented on the working group and agreed to the standard. However it appears that no collective decision has been made on certification of Church-owned forest lands. This is being left up to individual dioceses.

Finally the National Board of Forestry has been left with no clear role in programme implementation. The Board is currently planning a successor extension and training campaign to “A Richer Forest”, which will be called “A Greener Forest” and have a landscape ecology focus (Norrfaik 1998). This will be mostly aimed at private forest owners and may allow them to find ways to follow the lead of the forest companies in implementing ecological landscape planning. It could be argued that the forest certification process in Sweden has “privatised” forest policy and left the board with a marginal role. On the other hand, one could take the view that the standard fits within the objectives and framework of the 1993 Forest Policy and is simply an example of industry and NGOs accepting their responsibilities as they are expected to do in the 1994 Forestry Act. If private forest owners gradually start moving towards certification the Board’s activities in extension and training could provide valuable assistance in their preparation. Thus, it can be argued that the Board’s future role in programme implementation will largely depend on the decisions taken by private forest owners.

In November 1997, the Swedish FSC Advisory Board was set up to follow up on the activities of the working group, and to monitor the implementation of the standard. In the longer term it is intended to establish a national FSC association. The Advisory Board is composed of representatives from Korsnäs, the Forestry Society, WWF, SSNC, the Sami and labour unions.

The programme implementation phase has seen the appearance of a new set of actors in the policy domain: certifiers. Two international certifiers have been active in Sweden – SGS (Société Générale de Surveillance) and SCS (Scientific Certification Systems). They have both linked up with local partners: the Forestry Society and a consulting firm named Orgut. It is too early to define the role of certifiers at the policy level, but it is clear for example that if they begin to certify an increasing number of private forest owners, this will have policy implications.

6.7 DISCUSSION AND CONCLUSIONS

6.7.1 Strengths and Weaknesses of Forest Certification in Sweden and Recommendations for Improvements

The development of a forest certification programme in Sweden occurred under favourable circumstances compared to Canada and Indonesia, because a number of the forest conservation problems initially identified by NGOs (see Table 6.3, Section 6.4.2) had been addressed before programme development began. However several more questions should be dealt with if certification is to achieve its full potential in terms of improving forest management and providing market benefits for certified products.

First, procedures should be developed to maintain the dialogue between members of the FSC working group in a structured manner. This should provide a forum for addressing problems that emerge during programme implementation. It may also allow the participants to resolve other problems not directly related to certification.

Second, it will probably be necessary to develop a mechanism to feed back information from forest owners implementing the standard, and certifiers using it, to the working group. This would facilitate and inform the process of periodically updating the standard. It would also have the psychological benefit of keeping working

group members involved in programme implementation so they continue to support the standard and certification. The FSC Advisory Board, established in November 1997, may be able to help with these two issues.

Third, it will be important to make more progress on the establishment of new protected areas in Sweden, particularly in the south. This will require additional financing from the government, and by the summer of 1998 there were indications from the parliament that this might be forthcoming.⁸² Without the establishment of more protected areas, pressures will eventually increase on forest owners to protect more forests than required by the FSC standard. This will be polemical.

Fourth, certification will not succeed in the long term in Sweden without the support of a significant number of private forest owners, because they own half of the country's productive forests. Currently forest owners' associations are feeling isolated, vulnerable and even abandoned by the forest companies, partly because of political misjudgements by their own leaders. The dialogue should be restored, perhaps starting with Södra, and FSC procedures on group certification and product labelling may need to be revisited to address some of the concerns of private forest owners.

Finally, NGOs (especially SSNC) will need to continue to work with their members to convince them of the long-term benefits of a close partnership with the forest companies. This is a new relationship for NGOs, and will require careful management, both internally and externally. It is in the interest of the NGOs to do this, because they can look back at their work over 25 years and show their members and supporters concrete results on the issues they initially raised concerning forest conservation in Sweden. This provides a sound basis for future cooperation with the forest companies and other actors.

We can make a preliminary evaluation of the Swedish programme using the same criteria as in Indonesia and Canada (Table 6.7).

6.7.2 Forest Certification in Sweden: Implications for the Advocacy Coalition Framework

The Swedish case provides support for a number of the ACF hypotheses concerning advocacy coalitions, policy change and coalition learning.

6.7.2.1 Coalition Learning and Changes in Advocacy Coalitions in the Swedish Case

From an ACF perspective, it can be considered that the resignation of private forest owners' representatives from the working group marks a major shift in the policy domain. We can see in the Swedish FSC process not only an example of policy-oriented learning across belief systems, but actually a change in the membership and belief systems of coalitions.

In the ACF, policy learning across coalitions is said to occur if one or both coalitions alter their policy cores, or important secondary aspects of their belief systems as a result of observed dialogue, rather than a change in external conditions. The probability of such learning is seen as a function of three variables: the level of conflict, the analytical tractability of the issue and the presence of a professionalised forum. Hypotheses have been developed for each of these variables, and the Swedish case provides support for all of them:

Hypothesis 6: Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that:

- i) each has the technical resources to engage in such a debate; and that
- ii) the conflict be between secondary aspects of one belief system and core elements of another or, alternatively, between important secondary aspects of the two belief systems

⁸² In 1999, the parliament approved a significant increase in the budget for establishing new protected areas. The priority for use of these funds was the purchase of private forest land in southern Sweden.

Table 6.7 Evaluation of the FSC Forest Certification Programme in Sweden

Criterion	Comments on Swedish System
Credible to consumers	So far the programme appears to be credible at least to some members of buyers' groups in the UK and Germany, as evidenced by payment of higher prices for certified products from AssiDomän. The link to FSC has helped with this.
Comprehensive to include all types of timber and timber products	Yes, although some forest companies who get most of their wood from private forest owners will find it hard to get their products labelled if their suppliers do not get certified.
Objective and measurable criteria	The standard is objective and measurable, although it should be noted that private forest owners' representatives argue that it discriminates against them
Reliable in assessment results	Yes, assessment results so far have been reliable
Independence from parties with vested interests	Yes
Voluntary in participation	Yes
Equal treatment, non-discriminatory in trade impact	Not relevant as the programme only applies to Sweden and there was little government involvement in its development.
Acceptable to the involved parties	All involved parties with the important exception of private forest owners' associations have accepted it
Institutionally adapted to local conditions	Yes
Cost-effective	No reliable data on this yet, but the fact that millions of hectares of company land has already been certified suggests that certification is cost effective, at least for large forest companies.
Transparent to allow external judgement	In general yes, although participation of actors in assessment and feedback to improve standards could be improved.
Goal oriented and effective in reaching objectives	Yes
Practical and operational	Yes
Applicable to all scales of operation	The applicability to private forest owners has been strongly questioned

Although the ACF does not define an intermediate level of conflict, the situation in 1995 and 1996 when work on the Swedish standards began, does appear to correspond to an intermediate level of conflict between the Forestry and Environmental Coalitions. NGOs were putting the industry under pressure domestically and in export markets, but there were no incidents of illegal activities or violent blockades of logging operations. It is clear that some of the representatives from both coalitions had the technical resources to engage in a debate on environmental issues in forestry. Not only were some of the NGO representatives (including the Greenpeace expert) trained foresters, but most of the large companies had experienced forest ecologists on staff (often in senior positions), who were professionally respected by their NGO counterparts. As indicated in Table 6.2 in Section 6.4, there were significant differences between the two coalitions on both secondary aspects and policy core beliefs in 1992.

However, the identification of biodiversity conservation in forests as a key issue and the new Forestry Policy of 1994, which gave equal emphasis to production and environmental protection, meant that the definition of the problem and the orientation on substantive policy conflicts had evolved by the time the working group was established. This allowed significant policy-oriented learning within the FSC working group. The changes went beyond Point 2 in Hypotheses 6, because policy core beliefs in both coalitions changed. Within the ACF, if this occurs we might expect to find changes in coalition structure and membership. This is what happened in Sweden. A strong case can be made that during the Swedish FSC process there were a number of changes in the secondary aspects and core policy beliefs of actors in **both** coalitions. This policy learning, combined with external events such as Sweden joining the EU, led to a restructuring of the domain, which is now dominated by a Sustainable Forestry Coalition made up of the members of the environmental coalition and the forest companies, together with labour unions and the Sami. The private forest owners have been

Box 6.2 Swedish Forest Policy Domain in 1998

Forestry Coalition members

Regional forest owners' associations
Swedish federation of forest owners' associations

Sustainable Forestry Coalition members

Individual forest products companies
Swedish Forest Industries Association
Swedish Forestry Society
Swedish Forestry Association
Labour unions
Swedish Society for Nature
WWF-Sweden
Fältbiologerna
Greenpeace Sweden
Sami
Certifiers

The National Board of Forestry is not clearly located in either coalition.

left isolated as the only remaining member of the Forestry Coalition. There is a new alignment of actors in the policy domain (Box 6.2) and the new coalition displays different policy cores and secondary beliefs (Table 6.8)

In the ACF changes in the membership of advocacy coalitions are considered to be so rare that there is no specific hypothesis about them. Based on the Swedish case study the following hypotheses can be proposed:

New Hypothesis: Changes in the membership of advocacy coalitions (i.e., movement of an actor from one coalition to another) will be preceded by both policy learning across coalitions affecting the policy core of belief systems and major External System Events affecting the resources available to domain actors.

The long-term stability in the Swedish forest policy domain before certification reached the agenda provides support for the first ACF hypothesis:

Hypothesis 1: On major controversies within a policy subsystem when policy beliefs are in dispute, the lineup of allies and opponents tends to be rather stable over periods of a decade or so.

Table 6.8 Policy Core Beliefs and Secondary Aspects of the Old and New Advocacy Coalitions in Sweden, 1997

Policy Core Beliefs	Forestry Coalition	Environmental Coalition	New Sustainable Forestry Coalition
Definition of the problem	Need for Swedish forest industry to compete in an increasingly competitive international market	Impacts of intensive forestry practices on biodiversity	Need to conserve biodiversity and provide market benefits for wood from well-managed forests
Identification of social groups whose welfare is most critical	Forest owners, shareholders of forest industry	General public	Public, customers, shareholders, Sami, workers and private forest owners.
Orientation on substantive policy conflicts	Economic development	Environmental protection	Need to balance environmental protection with economic development
Basic choices concerning policy instruments	Preference for incentives and communication tools	Preference for more use of regulatory tools	Preference for incentives for forest management within a framework provided by legislation
Desirability of participation by various segments of society	Forest owners should have the final say in what happens on their lands, but the public should be kept informed and have a chance to express their views	More public participation is necessary, e.g., local NGOs should have the right to sue forest owners who violate environmental legislation	Public participation in setting environmental standards and negotiating solutions to problems is essential
Ability of society to solve problems in this policy area	Our knowledge of forestry provides the scientific basis to manage forests to meet the needs of society	Our understanding of ecosystems is incomplete and we may be underestimating the impacts of modern intensive forestry on biodiversity	We can solve forest management problems; in the absence of clear data adopt the precautionary principle and support more research
Secondary Aspects			
Decisions concerning administrative rules, budgetary allocations, statutory interpretation and revision	1994 Forestry Act provides adequate basis for forestry operations	Act should be strengthened to allow NGOs to sue violators and budget for establishing new national parks and protected areas needs to be increased.	Focus on implementing certification standards
Information concerning programme performance, seriousness of the problems etc.	Performance of companies, forest owners and National Board of Forestry is adequate. No urgent problems in Swedish forestry.	Biodiversity conservation is an urgent problem which has not been properly addressed.	Biodiversity conservation is an important problem which can partly be addressed by certification and partly by expanding the protected area network

Sources: Olssen and Olssen (1973); Eckerberg (1987); Gamlin (1988); SFIA (1996a); SI (1996a); SWG (1997b)

If the belief systems and composition of the forest policy domain in Sweden have changed because of a mixture of external events and developments in the policy domain, its fundamental corporatist nature does not appear to have changed. The domain is still dominated by a number of major interest groups. There is no suggestion of the more direct public participation that would be associated with pluralism. The influence of the NGOs, Sami and labour unions have increased while that of private forest owners has declined, at least temporarily. We do need to ask some questions however on the implications of these developments for the National Board of Forestry. The Board was not directly involved in the certification debate and will probably play a limited role in the ongoing efforts by the national Environmental Protection Agency to establish more protected forest areas. The coalition of which it was a member has been fragmented.

The National Board of Forestry has been placed in a situation where it does not clearly belong to either coalition. Although its belief system is compatible with that of the Sustainable Forestry Coalition, it has traditionally been close to private forest owners. This situation, where an administrative agency has taken a more moderate position than its natural constituency, provides support for another ACF hypothesis on coalition learning:

Hypothesis 10: Within a coalition, administrative agencies will usually advocate more centrist positions than their interest-group allies.

We therefore find a new situation in 1998 of a forest policy domain dominated by a Sustainable Forestry Coalition in which the most important actors are NGOs and the forest companies. Both labour unions and the Sami are part of this coalition.

It could be argued that while this may be the alignment of actors on certification, the structure of the domain has not fundamentally changed and that the traditional commercial links

between forest owners and forest companies will prove stronger than potentially temporary agreements on a particular issue between actors. This argument is not convincing for several reasons. Certification of their forest management is a very important issue for forest companies with significant cost implications. It is hard to imagine that they simply agreed to a “coalition of convenience” with NGOs on certification. The changes in the policy cores of NGOs and forest companies are clearly demonstrated by their agreement to the FSC standard. In approving the standard, NGOs agreed that wood production was a valid and important forest function. Forest companies recognised the need to take concrete measures to address biodiversity conservation, even if these have an impact on harvesting rates. Following the ACF, we can argue that such changes in belief systems will have substantial implications for other issues as well as certification.

A development since the certification standards were finalised suggests that this is the case. In early 1998 the former chair of the working group, Lars-Eric Liljelund, was asked by the National Environmental Protection Agency to examine the options for seeking voluntary commitments from private forest owners and companies to protect potential sites for protected areas from logging until government funding to purchase them became available. According to a number of people interviewed for this thesis, the forest companies were generally supportive of this (which was welcomed by NGOs) whereas forest owners’ associations were more reticent (L.-E. Liljelund personal communication, February 1998; P. Simonsson, personal communication, April 1998; S. Wirtén, personal communication, February 1998). It appears that on the issue of protected areas, we again find NGOs and forest companies taking similar positions different to those of private forest owners. Another development that signalled change was the partnership announced in June 1998 between AssiDomän and WWF to promote the Forest Stewardship Council and environmentally

responsible forest management in Europe (AD/WWF 1998).

Future developments on forest certification in Sweden may provide valuable evidence for comparing the predictive powers of the ACF with more traditional interest-based theories. Following the ACF, we can expect the NGOs and the forest industry to continue to work together because their belief systems are very similar. On the other hand an interest-based approach might lead us to expect that the traditional partnership of private forest owners and the forest companies will reassert itself because of the economic interdependencies involved.

The Swedish case also provides support for two other hypotheses on coalition learning:

Hypothesis 7: Problems for which accepted quantitative data and theory exist are more conducive to policy-oriented learning across belief systems than those in which data and theory are generally qualitative, quite subjective or altogether lacking.

Hypothesis 8: Problems involving natural systems are more conducive to policy-oriented learning across belief systems than those involving purely social or political systems because in the former many of the critical variables are not themselves active strategists and because controlled experimentation is more feasible.

A strong case can be made that it was the collection of quantitative data on biodiversity conservation in Sweden (particularly “red lists” of endangered species), and field tests by companies on ecological landscape planning, that catalysed changes in the way the forest industry and private forest owners viewed forest conservation issues. The existence of independently established quantitative data on biodiversity was critical in promoting policy learning.

The attitudes of private forest owners are indicative of the differences between policy learning on natural and social systems. While forest owners were willing to accept the

legitimacy of biodiversity conservation issues (even if they did not agree on the exact measures needed to address the issues), they were much more reluctant to address the social issues raised by the Sami and the labour unions.

Finally the Swedish case provides support for the ACF hypothesis on the importance of a professional forum in policy learning:

Hypothesis 9: Policy-oriented learning across belief systems is most likely when there exists a forum which is:

- (1) prestigious enough to force professionals from different coalitions to participate; and
- (2) dominated by professional norms.

The forum in this case was the FSC working group, which met both criteria of the hypothesis and clearly played a vital role in policy learning. The chairman of the working group appears to have played a key role as a “policy broker”. The fact that forest companies joined the working group despite initial reticence indicates that they considered it to be important (this was probably more significant than the prestige of the forum) and the way the group operated showed that it was dominated by professional norms. This is confirmed by the way in which unresolved issues, such as Permetrine treatments and the use of exotic species, were addressed through a process of collecting additional information and making a consensus decision by a certain date.

6.7.2.2 Policy Change in Sweden

There were significant changes in public policy in Sweden before the FSC working group was established, with the adoption of the 1993 Forest Policy and 1994 Forestry Act. However, certification itself as a voluntary market instrument, has not led to any formal changes in public policy. Accordingly, the Swedish case provides little basis for the evaluation of ACF hypotheses on policy change. The fact that it was under the non-socialist government elected in 1991, that the Forest Policy and Forestry Act

were revised gives some support to the ACF Hypothesis 4:

Hypothesis 4: The policy core (basic attributes) of a governmental programme in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that initiated the programme remains in power within that jurisdiction –

except when the change is imposed by a hierarchically superior jurisdiction.

However, it should be noted that work on revision of the Forest Policy had begun even before 1991 when the Social Democratic Party was still in power. In addition, when the Social Democrats returned to power in 1994 they did not modify the Forestry Act.

Chapter 7

Conclusions and Discussion

7.1 REVIEW OF THE GOAL AND OBJECTIVES OF THE THESIS

It will be recalled from the introduction that the goal and objectives of this thesis were as follows:

The **goal** was to understand which national and international actors are supporting or opposing certification and why, and how certification may contribute towards the improvement of forest management practices.

The thesis had three **objectives** in line with this goal:

- 1) to describe and analyse the policy process which led to the development of forest certification programmes in Canada, Sweden and Indonesia from a policy network perspective, using the Advocacy Coalition Framework (ACF) as a theoretical framework;
- 2) to contribute to a better understanding of the potential strengths and weaknesses of forest certification as an incentive for better forest management, and to make some recommendations for the improvement of the three certification programmes; and
- 3) to review the strengths and weaknesses of the Advocacy Coalition Framework and make some recommendations for modifications to it, if necessary.

Objective 1 was addressed through the case studies in Chapters 4, 5 and 6, and the description of the policy processes in the three countries will not be repeated here. Similarly, these chapters included recommendations for the improvement

of the certification programmes, which correspond to the second part of Objective 2. In consequence, this concluding chapter will focus on two themes. First, proposals for improvements to the ACF, and second, a discussion of the potential future role of forest certification as a policy instrument.

7.2 THE ADVOCACY COALITION FRAMEWORK: CONCLUSIONS AND DISCUSSION

7.2.1 Conclusions: A Review of the Advocacy Coalition Hypotheses

The case studies allowed a critical examination of most of the ACF hypotheses (see Table 7.1).

In conclusion, it can be seen from the table that each hypothesis obtained at least partial support from two or more case studies, with the exception of hypotheses 3 and 11. No hypotheses were rejected. Together with Hypotheses 1 and 2, Hypothesis 3 concerns advocacy coalitions, and the case studies suggested three additional hypotheses in this area, which should strengthen the ACF's treatment of coalitions. The basic problem here from an ACF perspective is that advocacy coalitions will not always be the best way to aggregate actors in a policy domain. In addition, even if coalitions are appropriate, members may sometimes be more similar in secondary aspects than core policy beliefs. The second situation is probably rare, but the first is likely to occur more frequently.

The lack of support for Hypothesis 11 can be explained by two factors. First, it reads as an

Table 7.1 Summary of Comments on the ACF Hypotheses from the Case Studies

Hypotheses	Comments from Indonesian case study	Comments from Canadian case study	Comments from Swedish case study
<i>Hypotheses concerning advocacy coalitions</i>			
<i>Hypothesis 1:</i> On major controversies within a policy subsystem when policy beliefs are in dispute, the lineup of allies and opponents tends to be rather stable over periods of a decade or so.	Support for the hypothesis. The major controversy in the Indonesian forest policy domain is about the rate and manner in which forest resources are being exploited and converted. In this controversy, we find on one side a Forestry Coalition whose belief systems stress the importance of forest exploitation, and on the other an Environmental Coalition stressing environmental protection.	Support. Canadian forest policy domains have traditionally been dominated by a Forestry Coalition with a production-oriented belief system. Over the last decade, Environmental Coalitions placing value on forest protection have evolved in a number of provinces and at the national level.	Support. The long stability of the Swedish forest policy domain before certification reached the policy agenda provides support for this hypothesis. However, the Swedish case subsequently developed in a way that is not covered by ACF hypotheses leading to changes in the composition of coalitions. As a result of the Swedish case study a new ACF hypothesis can be proposed: <i>Changes in the membership of advocacy coalitions (i.e., movement of actors from one coalition to another) will be preceded both by policy learning across coalitions affecting the policy core of belief systems and major External System Events affecting the resources available to domain actors.</i>
<i>Hypothesis 2:</i> Actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core, but less so on secondary aspects.	Partial support, but there is also the possibility of actors in a coalition agreeing more on secondary aspects than policy core beliefs. Danger of circular logic in thinking about belief systems.	Partial support. Additional hypothesis proposed: <i>Public conflicts between coalition members concerning policy core issues are likely to be a warning sign of impending policy changes in the domain and/or the emergence of a new advocacy coalition.</i>	The recent changes in the composition of coalitions in Sweden created a situation where it was not possible to examine this hypothesis.
<i>Hypothesis 3:</i> An actor or coalition will give up secondary aspects of a belief system before acknowledging weaknesses in the policy core.	Support, but depending on the nature of issues under debate in the policy domain, coalitions may not always be the best way to aggregate actors. New hypothesis proposed: <i>The existence of recurrent oppositional issues in a policy domain favours the formation of advocacy coalitions.</i>	Unclear. There are examples in Canada about disputes between Forestry Coalition members about secondary aspects such as budgeting and planning issues, which have not led to changes in the policy cores suggesting that the latter are more stable. On the other hand it is not clear that the public conflicts between coalition members referred to in the new hypothesis above were preceded by disputes over secondary aspects.	As in Canada, this is unclear in Sweden. It is implicit in this hypothesis that changes in the policy core of the belief system of an actor or a coalition will be preceded by changes in secondary aspects and it is not clear that this "incremental" process was followed in Sweden. The changes in the core beliefs of actors, which led to the formation of the Sustainable Forestry Coalition, were more of a paradigm shift, than incremental change.

Table 7.1 Continued

Hypotheses	Comments from Indonesian case study	Comments from Canadian case study	Comments from Swedish case study
<i>Hypotheses concerning policy change</i>			
<i>Hypothesis 4:</i> The policy core (basic attributes) of a governmental programme in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that initiated the programme remains in power within that jurisdiction – except when the change is imposed by a hierarchically superior jurisdiction.	Strong support. Forest policies in Indonesia are still based on the 1967 Basic Forestry Law. This stability in policies is linked to the institutional and political stability of the Golkar movement that has been in power since 1965. ⁸³	Support in both British Columbia and New Brunswick. In British Columbia, policy changes followed the election of a Social Democratic government in the early 1990s.	Partial support. The Swedish forest policy and legislative framework were revised after the election of a non-Social Democrat coalition government in 1991. However, the revision had been partly prepared already the Social Democrats, who did not overturn the modifications when they returned to power in 1994.
Hypotheses 5: Changing policy core attributes of a government action programme requires both (1) significant perturbations external to the subsystem (e.g., changes in socioeconomic conditions, system-wide governing coalitions, or policy outputs from other subsystems), and (2) skilful exploitation of these opportunities by the (previously) minority coalition within the subsystem.	Partial support because certification has not led to a change in the policy core of government programmes yet. However if LEI is successful, the Ministry of Forestry may modify its core beliefs concerning its role in monitoring forest concessions. In this case this would have been preceded by the two elements discussed in the hypothesis.	Strong support is provided by the events in the early 1990s in British Columbia. In fact, this example shows that elements 1) and 2) of the hypothesis can be linked in that Greenpeace lobbying (i.e., 2) contributed to external system events in European markets (i.e., 1).	Unclear. The policy changes represented by the 1993 Forest Policy and the 1994 Forestry Act do represent a modification in the policy core of a governmental programme. They were preceded by changes in socioeconomic conditions, but much of the impetus for the changes came from the private forest owners who were not a minority coalition in the domain.
<i>Hypotheses concerning coalition learning</i>			
<i>Hypothesis 6:</i> Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that: i) each has the technical resources to engage in such a debate; and that ii) the conflict be between secondary	Support. The Indonesian case suggests that a low-to-medium level of conflict is optimal for policy-oriented learning. The absence of conflict is unlikely to favour learning, but extreme conflicts might lead to situations where the dominant coalition could stop contentious issues from	Support. There is little evidence of policy-oriented learning across belief systems in Canada. Consistent with this hypothesis, this can be partly explained by the limited technical resources of the environmental coalition, and partly because conflicts tend to be about core elements of	Support. There has clearly been policy-oriented learning across belief systems in Sweden as evidenced by the identification of biodiversity conservation as a key issue. Both coalitions had the technical resources to engage in the debate and the level of conflict was generally intermediate. The developments in the Swedish

⁸³ As noted in Chapter 4, the political situation has now evolved in Indonesia and the Golkar movement is no longer in power. However these political changes have been accompanied by policy changes in the forest sector, which would appear to be consistent with this hypothesis.

Table 7.1 *Continued*

Hypotheses	Comments from Indonesian case study	Comments from Canadian case study	Comments from Swedish case study
aspects of one belief system and core elements of the other or, alternatively, between important secondary aspects of the two belief systems.	reaching the policy agenda at all.	belief systems rather than secondary aspects.	case went beyond what is envisaged in Hypothesis 6 in that the core beliefs of both coalitions changed, leading to a realignment of coalitions.
<i>Hypothesis 7:</i> Problems for which accepted quantitative and theory exist are more conducive to policy-oriented learning across belief systems than those in which data and theory are generally qualitative, quite subjective, or altogether lacking.	Partial support, but danger of circularity in the hypothesis.	There is little evidence of policy-oriented learning across belief systems in Canada, so it was not possible to examine this hypothesis.	Strong support. A convincing case can be made that the collection of quantitative information on biodiversity conservation by scientists and NGOs in Sweden catalysed changes in policy cores in both coalitions.
<i>Hypothesis 8:</i> Problems involving natural systems are more conducive to policy-oriented learning across belief systems than those involving purely social or political systems because in the former many of the critical variables are <i>not</i> themselves active strategists and because controlled experimentation is more feasible.	Partial support, danger of circularity in the hypothesis.	As above.	Strong support, as with Hypothesis 7.
<i>Hypothesis 9:</i> Policy-oriented learning across belief systems is most likely when there exists a forum which is: i) prestigious enough to force professionals from different coalitions to participate; and ii) dominated by professional norms.	There was no such forum in Indonesia, so it was not possible to examine this hypothesis.	Support is provided by the examples of some of the fora created by the government to discuss forest policy changes in British Columbia. Several of these fora met these criteria, and it could be argued that the fact that NGOs did not consider the CSA Technical Committee to do so was one of the reasons it did not contribute significantly to policy-oriented learning.	Support. The Swedish FSC working group provided such a forum and its effectiveness can be attributed in large part to the fact that it met both these criteria.
<i>Hypothesis 10:</i> Within a coalition, administrative agencies will usually advocate more centrist positions than their interest-group allies.	The similarity of positions between the Ministry of Forestry and the forest industry does not provide any support for this hypothesis.	Support for this hypothesis is provided by the 1991 legal dispute in British Columbia between the Chief Forester and MacMillan Bloedel.	Support. The National Board of Forestry has avoided taking strong positions for or against certification, for example.

Table 7.1 *Continued*

Hypotheses	Comments from Indonesian case study	Comments from Canadian cases study	Comments from Swedish case study
<i>Hypothesis 11:</i> Even when the accumulation of technical information does not change the views of the opposing coalition, it can have important impacts on policy – at least in the short term by altering the views of policy brokers or other important government officials.	No clear support for the hypothesis but two policy brokers were identified.	The Canadian situation does not provide any real support for this hypothesis. However, it could be argued that the absence of policy brokers was an impediment to policy change and learning.	In the Swedish case the accumulation of technical information about biodiversity conservation did change the views of coalition members. It should be noted that the chair of the Swedish FSC working group played a key role as a policy broker.

“add on” hypothesis, and indeed was not included in the original formulation of the framework, but was added at a later stage. It does not fit in a fully coherent manner with the other ACF hypotheses in its reference to “views”. Second, it is unclear whether “views” refers to secondary or policy core aspects of belief systems. On the other hand, the mention of policy brokers of which three were identified in the research (two in Indonesia and one in Sweden) is interesting. In each case these policy brokers appear to have played a key role in coalition learning, and it is intuitively appealing to suggest that the rarity of credible policy brokers in many policy fora is an impediment to policy-oriented learning.

7.2.2 Discussion: A “Fast Track” for Policy Change

7.2.2.1 Introduction to the Fast Track

The ACF is based on the premise that to understand policy change, a perspective of a decade or more is required. It looks to External System Events or changes in Relatively Stable Parameters, rather than strategies of actors in policy domains, as the fundamental driving forces for this change. From an ACF perspective, the result of policy change is new or changed governmental programmes that produce outputs and impacts at the operational level. In summary, policy change is likely to be slow and infrequent and cannot be directly achieved by changes in actors’ strategies. In consequence, we can say that the ACF is a framework for policy stability as much as for policy change.

These premises may be valid for the public policy processes, which the ACF was designed to study, and the case studies by other authors cited in Chapter 2 generally provide confirmation of this. However, forest certification is not usually a public policy instrument. Its development has been led by NGOs and the private sector, and it has been prepared and implemented over a period of years, not decades. While the three case studies carried out for this thesis provide support for the ACF as shown in the section above, they also show that a “fast track” for policy change can be observed.

As its name suggests, this fast track is based on events that are measured in years, months, and even weeks, rather than decades. It is not only driven by External System Events but by the strategies of actors who move beyond the boundaries of policy domains to influence other actors in the domain. The result is changes in the private policies of companies, which can have direct operational impacts on forest management. The fast track provides a way to link international events and actors to the national or subnational policy domains, which are the focus of the ACF.

An example of the fast track process can be taken from the Canadian case study. It will be recalled that in June 1998, MacMillan Bloedel, the largest forest products company in British Columbia, announced that its policy was to meet the standards of all existing forest certification programmes as part of its new “Forest Project”, which had been approved by the company in May 1998. The Forest Project was initiated in November 1997 by Mr Stephens when he joined the company, after a high profile announcement

in the same month by the UK retailer B&Q (a founder member of the WWF-UK buyers' group) that they were cancelling an order of timber from MacMillan Bloedel worth between US\$1 and 2 million as a result of lack of progress of the company towards environmental improvement in forest practices and certification under the FSC programme. The Forest Project included a comprehensive review of the company's forest policy, and recommended increased conservation of old-growth forests, replacement of clearcutting and forest certification.

It was only a year before the June 1998 launch of the Forest Project, that the Toronto *Globe and Mail* reported on a series of setbacks for Greenpeace forest lobbying in British Columbia under the headline "Greenpeace Loses Support for B.C. Logging Practices". It seemed at the time that the combination of forest policy change in British Columbia, together with astute manoeuvring by the former Premier, had substantially weakened the Environmental Coalition in British Columbia, of which Greenpeace was a part. However, as a result of this setback Greenpeace changed tactics and moved beyond the British Columbia forest policy domain to lobby forest companies' clients in Europe and the USA. The result was reportedly several million dollars worth of cancelled contracts including the B&Q one.

It is interesting to note the government's role in this example of fast track policy change, recalling that in British Columbia the government owns the majority of forests. As late as May 1998, the British Columbian Ministry of Forests had been trying to defuse the situation by encouraging Greenpeace and other environmental groups to join in a two-year land-use planning process in the central coast region which the NGOs had been boycotting. These efforts were unsuccessful, and MacMillan Bloedel and the other companies took the initiative to announce changes in their forestry practices, without waiting for approval from the Ministry of Forests, although it was noted that the Ministry would have the final say on approving these changes. This is reminiscent of another Greenpeace campaign in 1995, when Shell decided not to sink the Brent Spar oil platform in the North Sea, as it had been authorised to do by

the British government, but to dispose of it on land (Rose 1998). The sudden policy change by the company caught the British Government by surprise and the *Daily Mail* described the situation as follows under the front-page headline "Shell U-Turn Sinks Major":

John Major⁸⁴ was left betrayed and humiliated last night after Shell lost its nerve and dropped plans to dump the Brent Spar oil platform. The climbdown, under pressure from Greenpeace, came only hours after the Premier gave his backing in the Commons to the controversial option (*Daily Mail* 1995).

Leaving aside the hyperbole, the Brent Spar incident is the textbook example of the fast track process which took only six months from Greenpeace first hearing of Shell's plans to sink the Brent Spar, to the reversal of the decision after an international campaign aimed at Shell's customers rather than actors in the UK or European marine policy domain. In the end, the Shell decision to change policy was made in a few hours without the knowledge of the statutory authority, the UK government, which had been involved in previous discussions at the highest level. After this the government had no alternative but to accept Shell's decision, and subsequently changed its policy on future disposal of oil platforms in the North Sea.

Turning back to policy change in British Columbia, it might be argued that the companies changed positions because of other factors than NGO pressures conducted through the fast track. The answer to this is both yes and no. Yes, because there were other factors such as the Asian financial crisis, changes in senior staff at MacMillan Bloedel, and the increase in logging costs because of the Forest Practices Code and these clearly also had an effect. No, because the companies said that they were changing because of market pressures, thus confirming the reality of fast track pressures. The fast track does not replace the slow track, but it can provide an additional process for policy change.

⁸⁴ John Major was the British Prime Minister at the time.

In fact, the Asian financial crisis of 1997/98 is an example of another fast track event: a one-off shock (although to be more accurate the crisis was a series of shocks). Because of the increasing globalisation of markets in which the Canadian forest products industry is an active participant, a market shock in a distant part of the world can have powerful impacts elsewhere, and more rapidly than in the past.

We can thus identify at least two categories of fast track events: one-off market shocks and NGO campaigns. Both can have quick results and the pressures are conducted through the media and market rather than through the traditional policy process. They have something else in common too: they are about both **expectations** and **results**. The concrete results of the Asian financial crisis in terms of lost markets cannot be denied. However, as in any financial crisis there are also less visible impacts on future expectations. This is even clearer in the case of NGO pressures. European markets only represent a small proportion of business for British Columbian forest product companies. For a company like MacMillan Bloedel, with over US\$1 billion in annual sales, a cancellation of an order worth US\$1-2 million is a pinprick. Yet, as the *Financial Times* reported, MacMillan Bloedel was convinced that loss of markets in Europe was a harbinger of worse to come (FT 1998b). There is no reliable basis for knowing whether this was an accurate assessment or not. However this is immaterial for the purposes of the argument. The point is MacMillan Bloedel's **expectations** of the future changed, in part because of market pressures generated by NGOs.

A presentation of the fast track would be incomplete without mentioning its "slower lane".⁸⁵ This is made up of the buyers' groups mentioned in Chapter 1, which bring together NGOs and retailers committed to sourcing certified timber, and allow policy learning. This lane is slower because the retailers normally change their suppliers over a number of years. However the slower lane allows policy learning to occur, partly because it is slower. In addition, actors can build up speed in the slower lane before moving into a faster lane. An example of this is B&Q, a member of the UK 1995+ buyers' group, but which

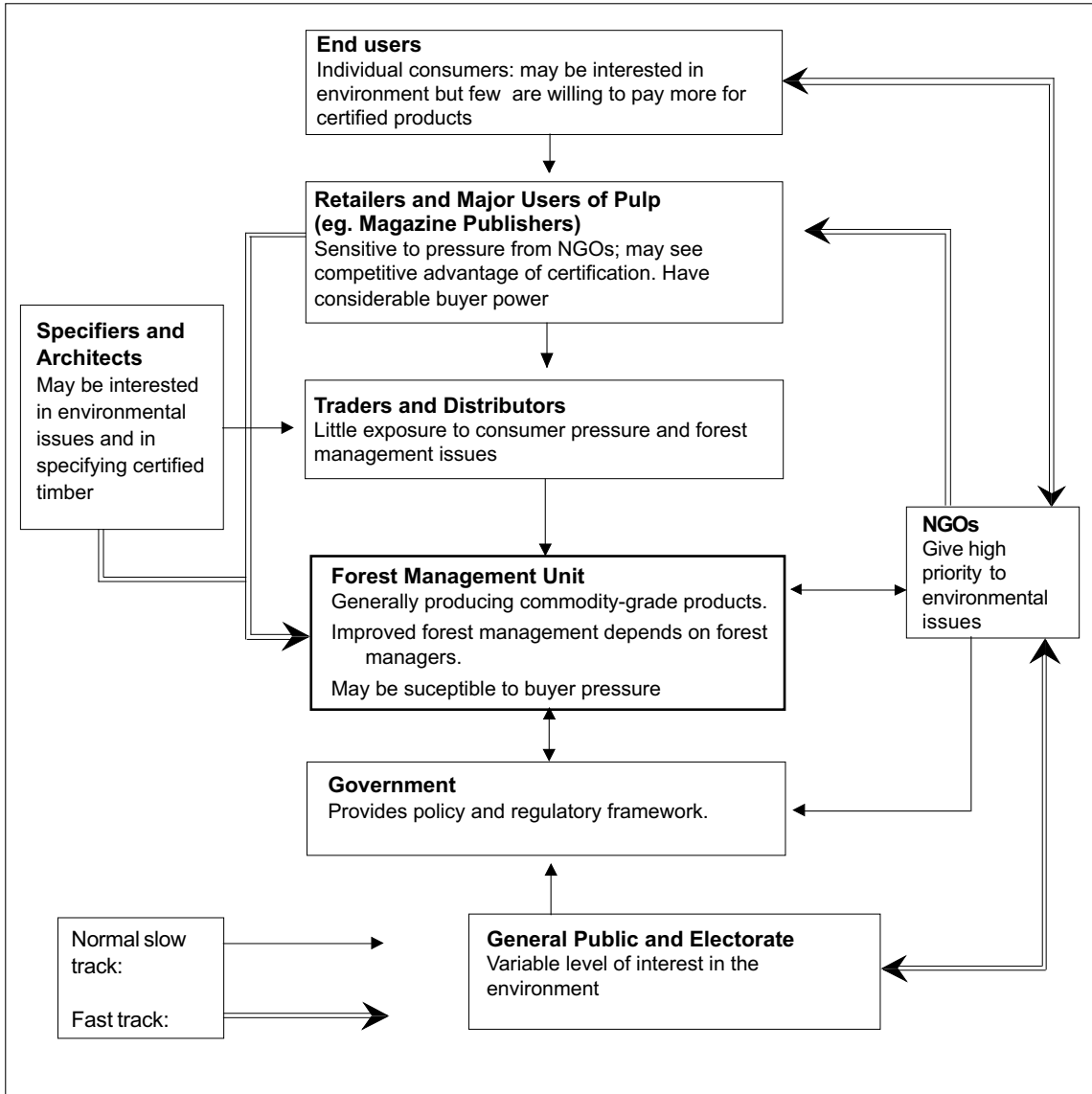
eventually went ahead of other group members in deciding to cancel its MacMillan Bloedel order.

The fast track is not just fast because of individual companies making decisions rather than waiting for the lengthy public policy cycle to be completed. A "multiplier effect" is generated by a reduction of the intermediaries who would normally buffer or dilute pressures coming from wood buyers. When B&Q buys timber from MacMillan Bloedel, or a German magazine publisher buys pulp, they do so through traders and distributors. Thus, while B&Q is directly exposed to pressures from consumers and NGOs it would not normally have direct access to its timber suppliers, or even know their identity. The traders and distributors are not themselves exposed to the same pressures as B&Q, and will have many other clients who have lower levels of "ecosensitivity". Both B&Q and the German magazine publishers eventually circumvented this problem by first identifying their suppliers, and second by visiting the most "problematical" ones such as MacMillan Bloedel (see Figure 7.1). The direct contact between the producer and buyer facilitates policy learning on both sides and can be seen as a key component of the fast track. Certification helped B&Q in this dialogue because it gave them something specific to ask their supplier to do. Since B&Q staff are not experts in forestry, and are not familiar with the situation in British Columbia, if they did not have this action or goal to propose, their discussions with MacMillan Bloedel could easily have been unproductive. Figure 7.1 shows how the forest manager can be affected both by the fast track and the normal slow tracks from government, and from traders and distributors.

The presentation of the fast track above has been largely based on just one example. It could reasonably be argued that this is an insufficient basis for the modification of a framework for policy change. This objection is valid. However, the counter-argument can be made that in each of the three case studies we can find

⁸⁵ We can use the analogy of a motorway, which has a number of lanes, some of which are slower than others, to illustrate the fast track.

Figure 7.1 The Forest Management Unit and the Fast and Slow Tracks



examples of the fast track. Within Canada the decision of J. D. Irving to seek certification is one. In Sweden the whole forest industry was on a fast track led by AssiDomän. Finally, in Indonesia APHI (Association of Indonesian Concession Holders) took the initiative to start work on certification after the adoption of ITTO Target 2000. The only difference between these examples and the MacMillan Bloedel case, is that MacMillan Bloedel was less proactive.

It is interesting to consider the circumstances under which the fast track is likely to exist and to be effective. Drawing on the three case studies, we can hypothesise that going beyond the boundaries of a policy domain to activate a fast track will be possible if the following conditions are met:

- 1) significant volumes of products are being exported by a domain actor to an ecosensitive market;

- 2) the NGO or other actor activating the fast track has a strong presence both in the export market country and the policy domain, and can coordinate the two effectively;
- 3) buyers (such as retailers) in the ecosensitive market are sensitive to the NGO concerns and consider them to be legitimate;
- 4) there is something specific and feasible that the domain actor can be asked to do to improve the situation (e.g., forest certification); and
- 5) other actors in the domain (e.g., government) cannot stop the actor from doing what is asked.

From a policy perspective, we can see the fast track as an approach in which a number of different types of policy instruments can be used by the proponents of change. These include symbolic, communication and incentive instruments. The fundamental problem will often be a public policy issue. In British Columbia it was clearcutting in old-growth forests and in Sweden it was biodiversity conservation. However, part of the fast track approach is not to present it as such, but rather as the responsibility of an individual company. The company will be selected by critical NGOs on the basis of its size and reputation. This has three advantages from a communications perspective. First, there is a clear corporate “villain”, preferably a big company. Second, other companies have no incentive to express solidarity with the company, even if their own practices are identical, lest they also become targets. In other words, the target is isolated. Third, the long and complex process of changing public policy can (at least temporarily) be ignored. This means that NGOs can avoid being co-opted onto commissions to study the problem which might only produce results after years or decades, if at all.

However, in the longer term the public policy process cannot be ignored. Even if the fast track is successful for the biggest companies, there will be many other smaller companies that will be less susceptible, and it is unlikely that they can be targeted one by one without media and consumers gradually losing interest in the issue. In addition, there is a limit to how much companies can change their practices without going bankrupt or violating legislation and regulations, if public policy change

does not occur. This is particularly important in countries where most of the forests are owned by government. It will be recalled that in most Canadian provinces a licence from the province to a company constitutes both a right and an obligation to harvest a certain amount of timber in a given time frame. In view of this, without public policy changes the options for companies to act on their own are limited. In this context it is interesting to note that MacMillan Bloedel accompanied their “Forest Project” with a policy paper proposing public policy changes entitled *Proposal for Stumpage and Tenure Reform in BC*. The paper was even labelled as a “white paper”, a term normally reserved for formal government policy proposals. In this case the fast track has contributed to one of the companies involved making public policy proposals, rather than waiting for NGOs, or the government to do this.

Is it only NGOs who can activate the fast track and can they do it as often as they want? Most of the examples from this thesis involve NGOs, but exceptions include the involvement of APHI (Association of Indonesian Concession Holders) in starting work on forest certification in Indonesia, and the activity of buyers’ groups. In principle, there is no reason why private sector actors cannot use the fast track as well.

If processes for public policy review and change are set in place, NGOs may face a tough choice in deciding whether to join in these options or continue with the fast track. If an NGO agrees to participate in a public policy process it is likely to lose credibility with other domain actors and public opinion if it simultaneously tries to use the fast track. We can draw a parallel here with Kriesi’s (1996) finding that in countries such as Switzerland where there are many mechanisms for actors to be involved in public policy processes, violent protests and civil disobedience are not seen as credible by the public. In contrast, in France where these mechanisms are weaker or absent, strikes and violent protests are more readily accepted (Kriesi *et al.* 1992). In British Columbia, Greenpeace was clearly aware of this problem and has generally avoided participating in public policy processes despite insistent efforts by the government. One possible tactic for NGOs is to allocate roles, with some NGOs participating in

public policy processes and others using (or threatening to use) the fast track. This would of course require close cooperation between NGOs, which cannot be taken for granted.

It should be noted that the fast track does raise some issues about the democratic process. In the worst case it could be seen as international NGOs and transnational companies working together to set policy behind closed doors. On the other hand, if these NGOs are to put public pressure on the companies, their demands must not only be made public, but must have some measure of public support. Despite this, NGOs would be well advised to be sensitive to issues of transparency and accountability when they use the fast track.

7.2.2.2 The Fast Track and Policy Analysis

Although the fast track concept has been developed inductively from empirical data, there are at least three reference points in the literature on policy analysis, which can be used to provide support for it.

The first is “venue shopping”. Various studies have suggested that effective actors will seek the most effective policy domain or venue to promote their ideas or interests. The authors of the “garbage can” model of the policy process refer to “fluid participation”, meaning that actors can alter the resources they devote to particular domains. In the “garbage can” model the policy process is viewed as a mix of:

choices looking for problems, issues and feelings looking for decision situations in which they might be aired, solutions looking for issues to which they might be the answer and decision-makers looking for work (Cohen *et al.* 1972).

Recent studies of policy-making in the European Union suggest that actors are continually seeking the most effective venue to promote their ideas, while trying to avoid these ideas being debated in venues that are not favourable. One study of NGO activities concluded that:

Much more research is needed but it seems reasonable to hypothesize that organizations

such as multi-nationals and interest groups such as Greenpeace, Friends of the Earth (FOE) and Worldwide Fund For Nature (WWF) are probably less constrained in their lobbying strategies and have more flexible preference formation processes than governments, for example...it would be rational for all interest groups wishing to influence the European policy process to avoid being locked into any one set of relationships (e.g. with “their” national government) or into any one advocacy coalition or any one policy community or policy network (Mazey and Richardson 1996: 213).

This is consistent with the description where an actor or actors in an advocacy coalition uses the fast track outside the policy domain to bring pressure to bear on another actor or coalition. The only difference is that the authors cited above are talking about different levels of public policy processes and seeking the most favourable one, which is not necessarily the fastest, although the two are likely to be linked. In the fast track concept we go beyond public policy processes to look at private policy formulation, and it is assumed that this will be faster if the right venue is chosen. It will be noted that these authors also mention multinational companies, suggesting that they might be able to use fast track approaches.

The second reference point is the literature on social movements. A social movement has been defined as collective efforts by people holding a common interest, using non-conventional political means beyond the framework of institutional or political systems.

Social movements normally involve at least four elements (Knocke 1990: 57):

- 1) socially disruptive actions targeted against public authorities and their symbols;
- 2) purposive tactics and strategies rather than emotional outbursts;
- 3) a high degree of group activity rather than elite leadership; and
- 4) social movement organisations that are distinct from the movement’s mass base in an aggrieved populace.

The logging blockades that targeted MacMillan Bloedel in British Columbia in summer 1993 are a typical example of social movement activity in line with these criteria. The fast track events described above are also broadly consistent with the criteria with two exceptions: the targets are generally companies rather than public authorities; and while group activities of members are important, the actions are coordinated by an elite leadership. Without clear coordination using electronic media, an international fast track approach is unlikely to succeed. If we see the fast track as one of several strategies available to social movements, we can explain Greenpeace's decision to cease logging blockades in British Columbia in 1993, and move to the fast track by the end of 1997, as an example of venue shopping because its position in British Columbia had weakened.

A comprehensive study of social movements in the USA from 1800 to 1974 suggests four lessons of relevance to the fast track (Gameson 1990):

1. groups that were active and disruptive are more successful than those that are passive when attacked;
2. effective groups are "combat ready" that is to say they have a centralised organisational infrastructure and adequate staff resources to mount effective campaigns;
3. socioeconomic crises benefit social movements challenging the status quo; and
4. the use of modern media, especially television, is the key to effective campaigning.

It should be noted that this study was limited to the USA and did not focus specifically on environmental issues. However, it is interesting to note that Greenpeace certainly meets criteria 1, 2 and 4 and the status of forests in British Columbia and other parts of the world has often been described as "crisis" since the mid-1980s.

Third, the literature on policy learning and policy change suggests that rapid policy change (whether incremental or paradigmatic) is often linked to changes in actors in a policy domain,

as discussed in Chapter 2, Section 2.3 (Durrant and Diehl 1989; Howlett 1998). This change can occur when a new actor joins the domain or an old actor leaves it. The fast track can be seen as a variation of this where an actor is pushed into a process of internal policy change. The individual actor may remain the same, but rather than being a participant in a public policy process, it temporarily shifts venue to focus on an internal policy process.

7.2.3 Recommendations for Modifications to the Advocacy Coalition Framework

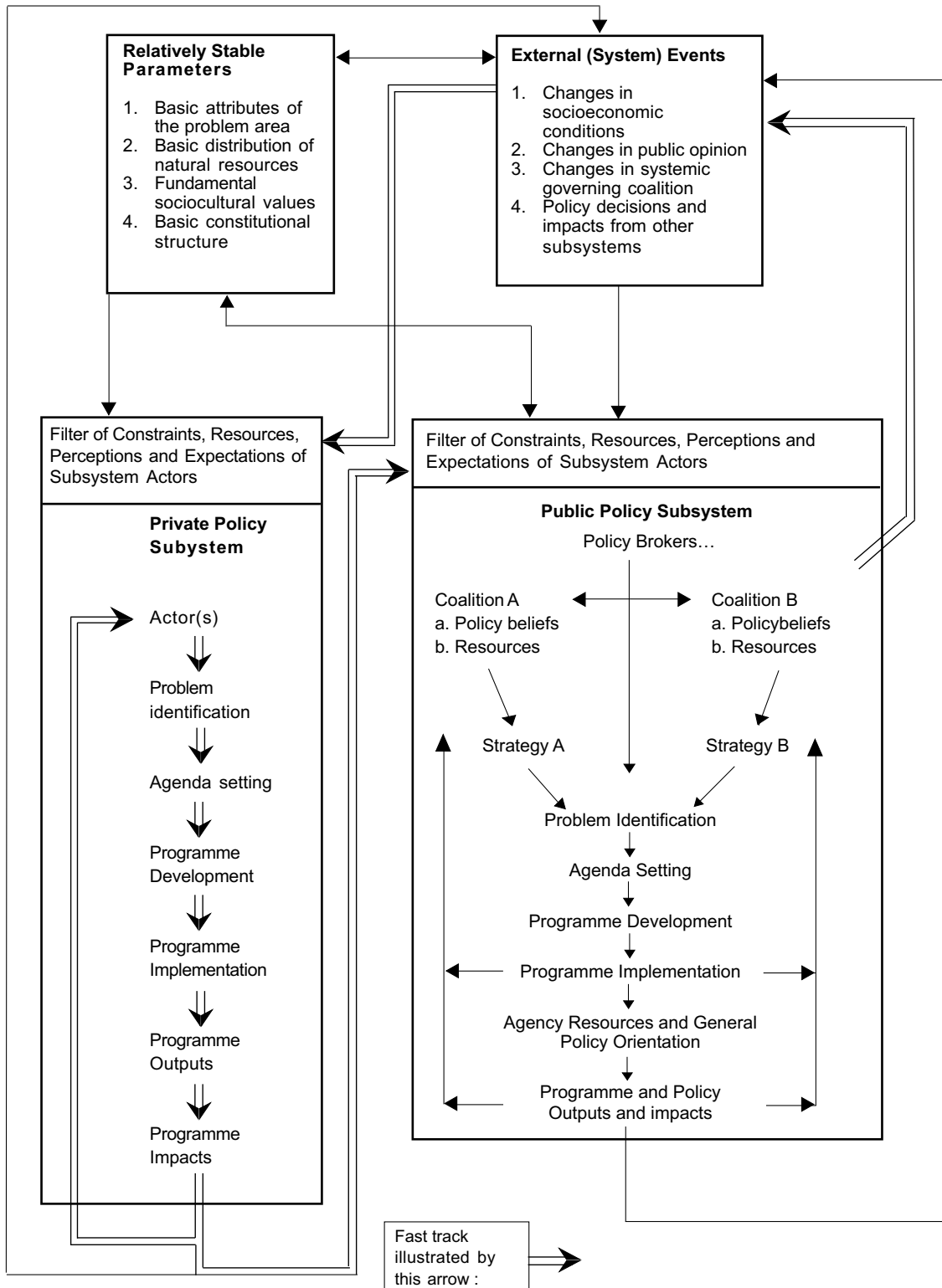
To conclude this discussion, a revised diagram of the Advocacy Coalition Framework is presented in Figure 7.2, incorporating the points mentioned above. This is based on the 1993 diagram proposed by Sabatier and Jenkins-Smith (1993) reproduced in Chapter 2, but the following elements have been added:

First, the stages of the "textbook" policy cycle have been added to the "policy subsystem",⁸⁶ which is now called "public policy subsystem". The addition of the steps was proposed in Chapter 2 as a way of organising information, and proved valuable in the case studies.

Second, a separate "Private Policy Subsystem" has been added. The actor or actors will normally be individual companies. It is assumed that within these companies the same staged policy cycle will occur, but over a period of months rather than decades as in the public policy cycle. Alternatively, there may be several different actors, as in the Swedish FSC working group, which is another example of a private policy process. It is possible to have advocacy coalitions in both cases, i.e., within and between these actors. This subsystem is influenced by the Relatively Stable Parameters and External System Events just as is the Public Policy Subsystem. However it is also influenced by the fast track. This track normally begins with actors in an Environmental Coalition in the Public Policy Subsystem who seek to exert

⁸⁶ In this thesis the term policy domain has been used instead of policy subsystem, but the original terminology is used here to simplify the situation for other users of the ACF.

Figure 7.2 Revised Diagram of the Advocacy Coalition Framework



market and public opinion pressure on the company, or companies, in question. In ACF terms, this is done by modifying socioeconomic conditions or public opinion, both of which are classified as External System Events. These modifications then feed into a fast track through the resources and constraints of subsystem actors. It will be noted that actors' perceptions and expectations have been added to resources and constraints in this box, to take account of the fact that fast track changes are influenced by these. The boxes containing these four elements have been moved into the policy subsystems boxes to function as a "filter", which is consistent with their role.

The results of changes in the Private Policy Subsystem feed into External System Events and also directly to the Public Policy Subsystem. This latter element is the last stretch of the fast track. It can lead to policy learning within coalitions as other actors in the coalition react to the decisions by the company on the fast track. The company may now either return to the coalition or stay on a fast track and modify other policies, depending on the circumstances. Three other changes should be noted. A fast track link for one-off socioeconomic shocks and, within the Public Policy Subsystem, two-way arrows between coalitions A and B. This indicates the possibility of policy learning across coalitions without passing through public policy change. Finally, to be consistent with the literature on policy networks it is assumed that Relatively Stable Parameters are **outside** policy subsystems, which are only made up of actors. Thus, the arrows between Relatively Stable Parameters and Public Policy Subsystems are made two-way to cover the possibility of actors in the subsystem affecting, for example, the distribution of natural resources by deforestation or burning.

The result is that Relatively Stable Parameters and External System Events are both seen as external to the policy subsystem, whereas actors and their resources and constraints are seen as internal.

With these modifications, the ACF becomes a framework for policy change in the late 1990s. The focus on actors, external events and subsystems is maintained but the possibility of rapid private policy change is introduced. The Indonesian case study has shown that the ACF can

be used to study public policy change in a developing country. It can now also incorporate private actors at the national and international levels. International actors and changes are introduced in an economical manner by including them in External System Events, rather than adding a whole new level to the framework. Making distinctions between actors and events inside or outside policy subsystems (or domains), rather than at the national or international level is not just consistent with the original formulation of the ACF. It is also consistent with a globalised world where the distinctions between national and international levels are increasingly blurred.

7.3 CONCLUSIONS ON FOREST CERTIFICATION AS A POLICY INSTRUMENT

The criteria for evaluating certification programmes presented in Chapter 1 were used in the case studies for a preliminary assessment of the three programmes (Table 7.2) and a comparison made between the programmes.

A review of the information in Table 7.2 shows that several of the criteria are particularly important for the three programmes in question.

- **Credibility to consumers** is uncertain for the Indonesian and Canadian programmes in the absence of clear performance levels and a product label.
- In none of the programmes is there consensus among actors in the policy domain that the **criteria** are fully **objective and measurable**.
- In the Swedish case, private forest owners argue that the standard discriminates against them so it is not **acceptable to all involved parties**. The Canadian programme suffers from a lack of NGO support.
- All programmes have weaknesses in terms of **transparency** but the Indonesian one is least subject to criticism in this regard.
- Both the Indonesian and Swedish programme have weaknesses in terms of **applicability to all scales of operation**.

These observations serve as the basis for a further discussion of forest certification.

Table 7.2 Summary of the Preliminary Assessments of the Indonesian, Canadian and Swedish Certification Programmes

Criterion	Comments on the Indonesian Programme	Comments on the Canadian Programme	Comments on the Swedish Programme
Credible to consumers.	It is unlikely that the LEI system will be credible to environmentally concerned international consumers until clear performance levels and a product label are included.	Absence of product label, performance levels and NGO support may weaken consumer credibility.	Yes, so far, at least to buyers' groups in the UK and Germany.
Comprehensive to include all types of timber and timber products.	LEI currently covers only natural forests. A system for certification of community forests and non-timber forest products should also be developed.	Yes, but it is the forest management rather than the products that are certified.	Yes, although forest companies who get most of their wood from private forest owners will find it hard to label their products if their suppliers are not certified.
Objective and measurable criteria.	The current criteria are relatively objective but are difficult to measure. Performance levels are needed.	The criteria for the forest management system are relatively objective, but there are no performance standards for forest management.	Yes, although the objectivity of the standard has been questioned by private forest owners who consider that it discriminates against them.
Reliable in assessment results.	It is too early to assess this, but in the absence of performance levels assessment results may not be seen as reliable.	Yes.	Yes.
Independence from parties with vested interests.	The separation of assessment from the issuing certificates is a good measure to favour independence.	The setting of performance standards by the companies to be certified (albeit through a public participation process) represents a weakness in this area.	Yes.
Voluntary in participation.	The intention of LEI is for the programme to be voluntary but the Ministry of Forestry may still want to make it obligatory. This should be resisted as it is likely to lead to Ministry control of the programme in the end.	Yes.	Yes.

Table 7.2 *Continued*

Criterion	Comments on the Indonesian Programme	Comments on the Canadian Programme	Comments on the Swedish Programme
Equal treatment, non-discriminatory in trade impact.	Not relevant for the present as the programme only applies to Indonesia and should operate largely independently of government.	Absence of product label, Not relevant for the same reasons as Indonesia.	Not relevant for the same reasons as Indonesia and Canada.
Acceptable to the involved parties.	This is the case so far and is one of the successes of LEI.	Provincial forest ministries and the private sector generally supportive. NGOs and some First Nations groups have criticised the programme.	Yes, with the important exception of private forest owners.
Institutionally adapted to local conditions.	Yes. The separation of assessment for issuing certificates is a clear example of this, as is the acceptance of the programme by all relevant actors in Indonesia.	Yes	Yes
Cost-effective.	Initial indications are positive particularly if certification is accompanied by a reduction in the reporting requirements to the Ministry of Forestry.	Too early to assess.	No reliable data yet but the fact that millions of hectares have been certified under the programme suggests that it is cost effective, at least for forest companies.
Transparent to allow external judgement.	Currently, in the absence of performance standards, transparency is not guaranteed, although the provisions for public consultation (and thus information) go beyond anything in the Indonesian forest policy domain today.	Public participation process should help with transparency in setting standards, but few provisions for transparency in programme implementation.	In general, yes although participation of actors in feedback and assessment could be improved.
Goal oriented and effective in reaching objectives.	The logical framework approach of the standard is designed to do this.	Goal oriented, but effectiveness in reaching market objectives unclear.	Yes
Practical and operational.	The lengthy and complex public consultation process may need simplification.	Implementing the standard may lead to excessive bureaucracy in forest companies	Yes
Applicable to all scales of operation.	So far only applicable to forest concessions in natural forests. Systems need to be developed for plantations as well as natural forests.	Yes, special efforts made to address the concerns of woodlot owners.	The applicability to private forest owners has been strongly questioned.

7.4 DISCUSSION OF FOREST CERTIFICATION

7.4.1 Forest Certification as a Policy Instrument

This section discusses forest certification as a policy instrument. A broader view is then taken in Section 7.4.2.

7.4.1.1 *Characteristics of a Viable Forest Certification Programme*

In the author's view, a number of characteristics of viable certification programmes can be suggested, based on the above analysis of the three programmes (Table 7.3).

7.4.1.2 *Management Systems and Performance Approaches to Certification*

The differences between the management systems and performance standards approaches to certification have been reviewed at length in previous chapters and will not be discussed again here in detail. However, in this concluding chapter it is necessary to take a position on how these two approaches should be considered. Several options are available. First, the two could simply be considered as two kinds of forest certification, each with its strengths and weaknesses. Second, the differences between the two could be stressed and different terminologies could be proposed, such as "forest certification" and "forest registration". Third, the complementarity of the two approaches could be stressed, drawing on examples from Sweden. All of these options have merits, but none will be retained here.

At the risk of appearing to be radical or polemical, my conclusion is that only the performance standards approach can legitimately be called "forest certification". The development and implementation of management systems, and the certification or registration of management systems, can undoubtedly be beneficial for a forest management unit⁸⁷ and for the environment. However, management systems approaches do not include all the necessary characteristics to comply with the criteria for a viable forest certification programme presented in Table 7.3.

What are the deficiencies of management systems approaches? First, management systems standards such as ISO 14001 are primarily internal management tools. Their target audience is an organisation and its clients and suppliers, rather than the general public. As such, they do not include provision for transparency or public participation in setting performance levels. Second, ISO 14001 does not include any performance levels beyond a commitment to continual improvement and legal compliance. Third, there is no provision for product labelling. The Canadian certification programme is an example of a comprehensive effort to add public participation procedures and a framework for performance standards to ISO 14001, but the weaknesses of this approach have been pointed out in Chapter 5. There is no obvious way to develop a certification programme that is credible to consumers, has objective and measurable performance criteria, and is acceptable to the involved parties on the basis of ISO 14001 or any other management system standard.

This should not be seen as a failure for these standards. It is simply that they were not designed for forest certification and, despite considerable ingenuity and efforts, it has not been possible to "retrofit" them for this purpose in a credible and effective manner. It is also not to say that forest managers should not use these standards. On the contrary, the Swedish case study has shown that both in the case of large vertically integrated forest companies and small private forest owners, systems standards can provide an invaluable framework to organise forest management. They can also provide a useful framework for policy-oriented learning within forest management units. In certain cases, it will be useful to have this framework certified. The point is that for the reasons mentioned above, the benefits of this certification are primarily internal and it will not serve as a reliable basis for public claims.

⁸⁷ The term forest management unit refers to the organisation that is responsible for managing the forest to be certified. It may be an individual or community forest, a forest concession, a forest company or a municipal forest, for example.

Table 7.3 Characteristics Certification Programmes Need to Possess to Satisfy the Evaluation Criteria Used in this Thesis

Criterion	Necessary Characteristics for Certification Programmes to meet this Criterion
Credible to consumers	<p>Clear performance levels must be either included in the standard or developed through a process involving the relevant actors and communicated in a reliable and transparent manner.</p> <p>NGOs and consumer groups must support the programme.</p> <p>A product label or other communication tool to identify certified products is needed.</p>
Comprehensive to include all types of timber and timber products	The programme must not <i>a priori</i> exclude any forest types or regions.
Objective and measurable criteria	The standards in the programme must be clear and specific and the language used must be normative. A framework of principles, objectives, criteria, indicators and norms as proposed by Lammerts van Bueren and Blom (1997) would be useful here.
Reliable in assessment results	The framework mentioned above would be helpful here. The certifier carrying out the assessment needs to have clear and rigorous assessment procedures.
Independence from parties with vested interests	The certification must be carried out by an independent, third-party, accredited certifier.
Voluntary in participation	Certification programmes cannot be required by law.
Equal treatment, non-discriminatory in trade impact	The programmes must be independent of government and conform with World Trade Organization agreements and rules.
Acceptable to the involved parties	There must be an open and transparent process for standards and programme development, conducted according to professional norms, which takes into account the views of all the actors in the policy domain, and allows for policy-oriented learning.
Institutionally adapted to local conditions	See above. The process must take into account any special local conditions.
Cost-effective	The programme must be designed to be as efficient as possible in reaching its objectives.
Transparent to allow external judgement	Actors' involvement must not be limited to standards development, but should continue through implementation and evaluation.
Goal oriented and effective in reaching objectives	The structure of principles, criteria, indicators and norms will help here.
Practical and operational	The programme should be as simple as possible while complying with the other criteria, and mechanisms for feedback and policy-oriented learning should be included to promote improvements.
Applicable to all scales of operation	Special measures should be taken where necessary to avoid discrimination against small-scale forest organisations.

It will be recalled that in Chapter 1 two objectives for forest certification were identified: to improve forest management and to ensure market access. To conclude this discussion on management systems standards it can be stated that they will not necessarily contribute to either objective, for the reasons mentioned above. Ironically, their weakness is particularly evident in relation to the second objective, because of the lack of a product label, although they have primarily been criticised by NGOs in respect of the first objective. In consequence, it is recommended that the use of the term “forest certification” be restricted to certification based on externally established performance standards.

7.4.1.3 Objectives of Forest Certification

The two objectives identified for forest certification in Chapter 1 served as the basis for selection of a number of criteria for the evaluation of certification programmes. In the case studies, these criteria were used to make preliminary evaluations of the three programmes. Based on these assessments, a number of characteristics of viable certification programmes have been proposed. In turn, an examination of these characteristics and criteria has led to the conclusion that the term “forest certification” should be restricted to performance-based approaches.

It is now time to complete the circle and re-examine the objectives of forest certification in light of the empirical evidence from the case studies. One of the key benefits of certification programme development in Sweden and Indonesia was a process that allowed a constructive discussion between actors on key problems in the policy domain and in consequence, policy-oriented learning. This thesis is being finalised at a point when programme implementation is still at an early stage, even in Sweden. It is therefore entirely possible that other benefits (and problems) associated with certification will emerge in the future. However, it is likely that the policy-oriented learning within and across advocacy coalitions will continue to be seen as a major benefit of certification in the future.

A new objective for forest certification can thus be proposed:

To promote and facilitate policy-oriented learning among actors in forest policy domains, such that acceptable standards of forest management, covering economic, social and environment issues in a balanced manner, can be defined and used.

This objective is consistent with the original definition of forest certification in the introduction, which was:

A process which results in a certificate being issued by an independent third-party attesting to the location and management status of a forest which is producing timber (emphasis added).

In adding this new objective, the “process” is extended “upstream” to include the development of the certification standards. In other words, a policy development component is added.

The addition of this objective is consistent with the empirical findings from Sweden and Indonesia. The absence of this element in the Canadian process is seen as one of its weaknesses. It is also consistent with the current emphasis in various international forestry fora on the importance of public participation. Finally it is coherent with the treatment of policy-oriented learning in the Advocacy Coalition Framework.

The inclusion of this objective requires some modification of the former first objective, which reads:

To improve the environmental, social and economic quality of forest management.

It is proposed that this should be changed to:

To provide incentives to forest managers to attain, or maintain, acceptable performance standards of forest management.

This objective incorporates the concept of incentives that was previously lacking, and recognises that some forest organisations may already be meeting acceptable standards. It is also more realistic than the previous objective since it limits the output of certification to the provision

of incentives, rather than going all the way to improved forest management, which is dependent on a number of other factors in addition to certification, as discussed in the following section. It should be noted however that there will still be some uncertainty about how powerful an incentive certification will actually be, until more economic and market data are available.

The former second objective:

To ensure market access for certified products, particularly in “ecosensitive” markets with high environmental awareness.

can be deleted, as market access is one of the incentives mentioned in the previous objective.

Because of the importance of improved forest management and market access, it is proposed to refer to them in a new goal:

The goal of forest certification is to improve the social, environmental and economic quality of forest management through the provision of incentives, including market access, to forest managers.

7.4.2 The Policy Process for Forest Certification

In Section 1.3, a seven-step process of certification was presented from the perspective of a forest organisation. The revised objectives presented above suggest that a broader perspective should be taken in which certification is seen as a policy process. One of the steps in this process is the implementation of the programme, but there are several other steps as well:

- 1) **Problem identification**
One or more of the actors in a forest policy domain become interested in certification as an instrument to improve forest management. The actors will normally, but not necessarily, include NGOs.
- 2) **Agenda setting**
As a result of initiatives taken by these actors, certification appears on the policy agenda in the domain and other actors take a position on it.

- 3) **Programme development**

A working group is set up to develop certification standards, and decide on the other elements of a certification programme (accreditation, labelling, etc.).

- 4) **Programme implementation**

Individual forest organisations implement the programme.

- 5) **Programme evaluation**

The working group puts in place mechanisms to allow feedback and policy-oriented learning from programme implementation.

In some cases (as in Sweden) this will be a private policy process, with little government involvement. However in general, government involvement can be anticipated. The nature of this will depend on the government’s role in forest management. This policy process will be intermediate between the “fast track” described in Section 7.2.2, and the slower track of the traditional public policy process. It will never be as rapid as the fast track of private policy-making in an individual company, because there will be several actors involved and it will take time for negotiations between them to occur. However, the number of actors is likely to be less than in the public policy process.

Using Schneider and Ingram’s (1990) classification of policy instruments which was cited in Chapter 1, certification can be said to involve the use of three kinds of instruments: learning, symbolic and incentives. Learning instruments are those that assist actors in defining problems and solutions. They assume that actors are capable of learning and identifying solutions. Working groups to develop standards in the programme development phase are an important learning instrument in certification. There should also be learning during programme implementation and programme evaluation. The product label and other public communication about an organisation’s forest certification can be seen as a symbolic instrument. Such instruments are designed to alter the perceptions of target populations, in this case timber buyers and consumers. Finally the role of certification as an indirect economic incentive is maintained.

The three policy instruments are used at different phases of the certification policy process and each will have different success indicators. For the learning instrument, the successful development of a certification programme, which is acceptable to the major actors in the policy domain, is a clear indicator of success. For the symbolic instrument of the product label, the frequency of the appearance of the label on products, and market benefits associated with the label would be useful indicators. Finally, for incentive instruments, confirmation from forest organisations that certification does actually provide market and/or non-market benefits would be an appropriate indicator.

7.4.3 Preconditions for Forest Certification

It was stated in chapter 1 that, as a policy instrument, certification should not be viewed in isolation but as one of the tools available to improve forest management. The case studies have produced no evidence that alters this view. Indeed, one of the conclusions of the Indonesian case study was that certification would be likely to have a marginal effect without fundamental policy changes in several areas. In Section 7.4.4, the relationship of certification to other policy instruments is briefly discussed. The purpose of this section is to provide a brief review of the preconditions necessary for certification programmes to function effectively, as background for the following section, drawing on the goal, objectives and criteria for certification programmes.

At this point it is worth noting that forest certification programmes can be implemented in two ways, which will be called “full implementation” and “partial implementation”. Most of the discussion so far in this thesis has dealt with full implementation, where national standards are developed through a consultative process, finalised, approved and then implemented. This is what is now occurring in Sweden and may shortly begin in Indonesia and Canada.

“Partial implementation” occurs when draft standards (or even the Forest Stewardship Principles and Criteria) are used without going through the full process described above. An

example of this is the certification of the Stora Ludvica district of Sweden in 1996, but the June 1998 Forest Stewardship Council list of certified forests, provides many other examples (FSC 1998). Indeed, with the exception of certifications in Sweden, all the others can be classified as partial implementation exercises, in which a combination of FSC Principles and Criteria, certifiers guidelines and input from local actors was used. In the Swedish case, the Ludvica pilot certification served a useful policy-oriented learning function and lessons from it were fed back into the Swedish FSC working group. This may also be occurring in other cases and the benefits and difficulties of this kind of exercise should not be underestimated. Partial implementation may provide a means to “kick start” working groups to develop standards. The opposite may however also occur. Forest managers and certifiers might be tempted to continue to carry out certification using draft standards, rather than expending the time and effort of following the standards development process through to the end.

Irrespective of the potential strengths and weaknesses of partial implementation, preconditions are more limited than those for full implementation, because at a minimum only one forest management unit needs to take the decision to seek certification. The preconditions can be identified as:

- 1) market demand for certification by one or more major clients of the forest management unit;
- 2) awareness of, and interest in, certification by the forest managers;
- 3) the forest management unit must have the basic requirements for forest management in place – secure tenure, adequate staff and resources, appropriate forest and environmental management plans and systems;
- 4) at a minimum, tacit support from the relevant government agencies and local communities;
- 5) absence of major controversies with neighbours, NGOs or indigenous peoples; and
- 6) availability of a credible, accredited certifier.

It should be clear that even if all these preconditions can be met, the performance of the forest management unit concerned may still be insufficient for it to be certified. In this sense, the preconditions should be seen as allowing the process of partial implementation to begin, rather than as guarantees of a positive result.

In the case of full implementation, the preconditions are more demanding, and have not been fully complied with yet in any case, even in Sweden. They can be described as:

- 1) The process of certification programme development with the participation of all major actors in the forest policy domain must be completed and the result should be acceptable to all involved parties. Dialogue between actors should be maintained after the standard is finalised, to address any issues emerging during implementation.
- 2) Issues such as product labelling and certification of small forest management units must be satisfactorily addressed.
- 3) There must be a demand for certified products in one or more important export markets, or in the domestic market.
- 4) Forest managers must be aware of certification and a number must make the decision that it is in their best interests to seek certification.
- 5) The performance of these forest managers must be close to the levels required in the standard, or the managers must make major efforts to ensure rapid improvements.
- 6) The relevant government agencies must provide at least tacit support for certification, and certainly not oppose it actively, particularly if the government is a major forest owner.
- 7) The major NGOs, consumer groups and indigenous peoples' organisations must support certification, and forest owners' organisations should not be actively opposing it.
- 8) Several credible, accredited certifiers should be available to allow for competition between them.

If we compare partial and full implementation in relation to the two objectives of certification identified in Section 7.4.1.3 we can see that full implementation contributes to both objectives whereas partial implementation only makes a direct contribution to Objective 2.

7.4.4. The Future of Forest Certification

Chapter 3 and the case studies indicated that the development of forest certification has been influenced by a number of trends and factors including:

- 1) the tropical forest "crisis" of the mid-1980s and the growing recognition of problems associated with the quality of temperate forests;
- 2) development of the concept of "sustainable development" which integrates conservation and development, and movement in forest policy discussions from a paradigm based on "sustained yield" to "sustainable forest management" and ecosystem management;
- 3) international and intergovernmental processes to develop criteria and indicators for sustainable forest management;
- 4) increased technical and financial capacity of NGOs, and the desire of some sectors of "civil society" for more involvement in forest management decisions;
- 5) trend towards a reduction of the role of the public sector in the economy and an increasing reliance on market forces and economic instruments; and
- 6) the growth in awareness and concern by consumers and buyers about the impacts of their purchasing choices on the environment.

None of these trends or factors is likely to be reversed or disappear in the medium-term future. Some of them will probably strengthen. For example, the recent criticism of the sports manufacturer Adidas, for allegedly using footballs made by child labour during the 1998 World Cup in France, and the criticism of Nike and Levi in the US media on similar grounds, suggest that affluent Western consumers are taking an increasing interest in the social and environmental impacts of their purchases.

In this context it has been suggested that the demand for certified forest products, and the credibility of communication to consumers are key factors for the future success of certification (Simula 1998a). The importance of these elements is clear, but if certification is viewed as a process rather than just as an individual policy instrument, other factors should also be considered (see Table 7.4).

The starting point for Table 7.4 is that the measures traditionally used to measure the success of certification programmes (hectares of certified forests, volumes and value of certified products) are incomplete if certification is viewed in the context of a policy process incorporating learning, incentives and symbolic tools. It is of course interesting to know that by June 1998 FSC-accredited certifiers had certified 119 forests in 25 countries, totalling over 10 million ha (FSC 1998). It will be recalled that this figure was 6.5 million ha in January 1998 and 3 million ha in September 1997. We can expect the area to continue to increase, albeit at a slower rate, because a significant part of the increase was a result of the rapid certification of large areas of forests in Sweden. It is not clear that there are any other countries with such favourable conditions for certification at present.

However, with the exception of Sweden, all of these were partial implementation exercises whose broader impact on forest management in the countries concerned is uncertain. For example, it is clear from the Indonesian case study that certification alone is unlikely to have an impact on deforestation in the country. The key element which may be missing is policy-oriented learning through the process of developing the certification standards and other elements of the programme. It is argued here that without this learning, the impact of certification on forest management is likely to be localised and limited and the future of certification therefore also depends on providing suitable conditions for learning to occur.

While, as Simula's (1998a) paper suggests, there is broad recognition among those involved in forest certification of the importance of consumer demand and credibility, the information in Table 7.4 suggests that the policy-oriented learning component of certification is equally

important. This learning provides a solid basis for the incentive and policy instruments to function and is likely to be the way to increase the impact of certification in the long term. It should be noted that the learning that occurs in the programme development phase can also contribute to the identification of other policy changes needed to encourage improved forest management and of policy instruments, which can complement the effects of certification.

The kind of process now being described as forest certification is demanding, difficult and complex. It cannot be otherwise if real changes are to occur in forest management. It is not clear how many other countries will be able to follow the Swedish (and to a lesser extent, the Indonesian) lead in going through the process. However, precisely because it is a process focussing in the first instance on learning, it can be argued that there are benefits in beginning it, even if no forests are certified for some time to come. The three case studies showed that dialogue between actors in forest policy domains is often difficult. If a certification programme provides a way to facilitate and encourage such dialogue, this can only be beneficial. In this sense we can look at certification as a means to implement the ecosystem-based approach to managing natural resources, which requires permanent dialogue among actors so that management objectives and approaches can be adapted to meet societal objectives.

The importance of other policy instruments should not be neglected in this respect. As indicated in Table 7.4, there are a number of learning, incentive and symbolic instruments that can be seen as complementary to certification. For example, if National Forestry Plans are in place or under development, the learning process required to develop the certification programme may be facilitated or even shortened. Similarly, the range of regulations and incentives already in place in most countries may promote or undermine efforts to improve forest management, and may need strengthening or modification accordingly. Part of the programme development phase should include a review of the policy framework for forest management and an assessment of what changes might be necessary.

Table 7.4 Elements and Indicators for the Success of a Forest Certification Programme Made Up of Several Different Policy Instruments

Evaluation Element	Type of Policy Instrument in Certification Programme		
	Learning	Incentives	Symbolic
Success Indicators	Successful development of a certification programme including performance standards	Market and non-market benefits of certification audits and product labelling for forest managers Hectares of forests certified and number of forest management units and countries involved	Frequency of the appearance of the label on products, market share, volume and value of the products, buyer and consumer recognition and acceptance of label which is the symbol of the programme
Effectiveness	Full participation of actors from policy domain in the process	Forest managers find certification programme to be practical and acceptable to NGOs, consumers and other relevant actors	Label is recognised and accepted by consumers and buyers
Efficiency	Process completed expeditiously	Forest auditing can be done in a cost-effective manner	Practical chain-of-custody tracing and systems for labelling products made partly from certified wood are in place Product label is legally protected and properly used
Impact	Performance standards widely accepted in forest policy domain even by actors who are not interested in certification audits	Other forest management units also seek certification, leading to wide implementation	Because of consumer and buyer acceptance, market demand for certification increases.
Other Aspects	Increased dialogue between actors and policy learning	No forest types or scales of operation are excluded from certification	Product labelling system is compatible with national legislation and World Trade Organization disciplines
Complementary Instruments	Use of mediators and facilitators If there is already a broad consensus in the domain on what the key problems are and how to address them this will help learning National Forestry Plans and other similar processes may contribute to learning	Training and communication programmes for private forest owners Ecological landscape planning for larger forest organisations Support to community forest management operations in seeking certification Policy and legislative framework promoting sustainable forest management and actor dialogue Criteria and Indicators for sustainable forest management Hierarchical framework of Principles, Criteria, Indicators, Verifiers	Clear legislation on labelling and advertising to avoid misleading claims Retailers and buyers are willing to actively promote the product label

7.5 RECOMMENDATIONS FOR FUTURE RESEARCH

Several lines of research can be suggested as a result of this thesis. Two sets of practical issues require research and monitoring. The first includes the real impacts of certification. This includes impacts on sustainable forest management, the costs and benefits of certification for forest managers, trade impacts of certification and access to certification for small forest owners. Although certification will almost invariably require some improvements in forest management even in the best managed forests, it is not yet clear how much certification has led to improved forest management, and how much the forests which have been certified were already well managed. Similarly, there is currently insufficient evidence to assess the costs and benefits of certification from the perspective of forest owners. Without this evidence, the long-term impact of certification on forest management is uncertain. It would also be useful to monitor the supply and demand of certified forest products.

The second issue is the need for research on ways to link certification with other policy instruments for achieving sustainable forest management. It has been suggested that certification should be seen as part of a package of measures for promoting sustainable forest management. More research is needed on how certification can complement other measures and how to avoid perverse effects such as discrimination against small forest owners or forestry in tropical countries.

To address these two issues, it will be useful to monitor and analyse the implementation of the three certification programmes studied in this thesis from the perspectives of effectiveness, efficiency, impact and secondary aspects. The latter two elements are particularly important for the long-term future of certification. It would be useful to monitor the performance of learning, incentive and symbolic instruments separately. In addition, other certification programmes and pilot implementation activities should be monitored and studied in a similar manner. One of the weaknesses of this thesis was that it was only possible to carry out three case studies. This sample was too small

to allow a discussion of the circumstances under which certification programmes can, and cannot, be developed and implemented effectively. A broader study in the future could address this question, and should examine the situation in countries such as Germany, Switzerland, Austria, Finland and the USA where the development of certification has encountered a number of significant problems.

Furthermore, at least four theoretical research avenues can be suggested as a result of the developments described in this chapter. First, as mentioned in Chapter 3, the international activities on criteria and indicators for sustainable forest management since 1992 may be a fertile field for application for the Advocacy Coalition Framework (ACF) model at the international level, rather than to national policy domains for which it was originally intended. Second, buyers' groups could be studied as examples of NGO/private sector coalitions, using a combination of the ACF and epistemic community approaches. Detailed studies of individual buyers' groups and their activities, and comparisons between the different groups might, for example, reveal the presence of "core members", some coming from NGOs and others from industry, which are part of an epistemic community of professionals trained in environmental sciences. It may be that buyers' groups with such "cores" are more effective than those without. From an ACF perspective, it is possible to view buyers' groups as an example of collective policy-oriented learning.

Third, the development of certification and the FSC may provide an interesting case to study the role of international NGOs in international policy processes. There are widely diverging views among specialists in international relations about the effective role of NGOs in these processes. For example, Raustiala (1994) has argued that, while NGOs have a role in international policy processes, it is mainly in terms of bridging the "two-level game" and keeping actors at the national and international levels informed about developments at the other level. However, it is governments who control the international processes and who decide what roles NGOs will be allowed to play in them.

On the other hand, taking an epistemic communities perspective Sikkink (1992: 411, 417) has stated:

In the post-World War II period, a human rights movement helped create regional and international human rights regimes. Nongovernmental organizations (NGOs) formed part of a network of organizations working together on behalf of human rights...What is often missed, however, is how NGOs helped spur state action at each stage in the emergence of human rights regimes...the Red Cross movement spearheaded the activities that created the law of human rights in armed conflict. A group of NGOs, the Anti Slavery League, led the campaign to protect the rights of those held in slavery and eventually to abolish slavery.

Although the role of NGOs in the development of certification appears to conform more closely to Sikkink's description than Raustiala's, there is a fundamental difference in that in promoting certification NGOs were not seeking an international convention on the subject, but were proposing it as a private, voluntary initiative. Irrespective of this difference, it would be very interesting to use the case of certification to study the roles of NGOs, and also the private sector, in international policy process. Concerning the latter, some authors have already suggested that private sector interests are gaining increased influence in international fora (Lee *et al.* 1998). It has been stated that the ultimate measure of political power is the ability to determine the subject of political debates (Schattschneider 1960). In this sense, the fact that certification, which was originally promoted by NGOs, has become a key theme in international forest policy debates over the last few years, is an indication of the growing political influence of NGOs in this debate.

Fourth, the choice of certification as a policy instrument by some NGO and private sector actors is interesting in terms of theories of instrument choice. There has been some research on governmental policy instrument choice and it has been suggested that the type of policy instruments selected in a given situation will depend on the political culture (Schneider and Ingram 1990). For example, Wildavsky (1987) proposes that authoritarian cultures will use tools based on sanctions and authority, individualistic cultures will use incentive tools and egalitarian cultures will prefer capacity-building and symbolic instruments. However, little research has been done to explain or predict the choice of policy instruments in a particular situation. Kelman (1981b) found that government officials making decisions about the use of environmental policy tools in the USA did not have any clear explanation for their preferences, but were influenced by ideology and familiarity with instruments already being used. What can be concluded from the literature is that the political context, organisational setting and problem situation are all thought to influence the choice of policy instruments but the decision-making processes and criteria are not clear (Lindner and Peters 1989).

It would be interesting to examine industry and NGO motivations for selecting certification as a policy instrument and to see whether this motivation is different in the cases of performance and systems-based certification. It would also be interesting to see whether supporters of certification see any link between the promotion of economic instruments such as certification and deregulation. Have NGOs, which used to support tropical timber boycotts and now support certification, undergone a change in policy beliefs or is this just an instrumental decision? Do the supporters of certification tend to have neo-liberal ideologies and believe that a combination of "green consumerism" and voluntary measures by industry are the best approaches to achieve sustainable development?

Bibliography

- Abusow, K. 1995 ISO 14000. What is it? What it means to the forest products industry. *Canadian Papermaker* 48(1): 23-2.
- AD/WWF (AssiDomän and World Wide Fund For Nature) 1998 AssiDomän and WWF: A partnership for the new millennium. AssiDomän, Stockholm, Sweden and WWF, Gland, Switzerland.
- Adiwoso, R. 1996 Certification scheme of sustainable forest management practices in Indonesia. *Asian Timber*, September 1996: 30-6.
- Adler, E. 1992 The emergence of cooperation: National epistemic communities and the international evolution of the idea of nuclear arms control. *International Organization* 46: 101-45.
- Adler, E. and Haas, P. 1992 Conclusion: Epistemic communities, world order and the creation of a reflective research programme. *International Organization* 46: 367-90.
- AGTF (Attorneys' General Task Force) 1990 The green report: Findings and preliminary recommendations for responsible environmental advertising. United States Justice Department, Washington, DC.
- Ahmad, M. 1994 The Importance of eco-labelling and timber certification for Indonesia's export markets. Discussion paper, East Asia & Pacific Country Department III, The World Bank, Washington, DC.
- Ahmad, M. 1995 The role of timber production in the Indonesian economy; reality or illusion? KONPHALINDO Publishers, Jakarta, Indonesia.
- Ahnlund, H. and Lindhé, A. 1992 Hotade Vedinsekter i Barrskogslandskapet-Nagra Synpunkter Utifran Studier av Sörmländska Brandfält Hällmarker och Hyggen. *Entomologica Tidskrift* 113: 13-23.
- Ajzen, I. and Fishbein, M. 1980 Understanding attitudes and predicting social behaviour. Prentice-Hall, Englewood Cliffs, NJ.
- Alford, R.R. and Friedland, R. 1985 Powers of theory: Capitalism, the state and democracy. Cambridge University Press, Cambridge, UK.
- Altegrim, O., and Sjöberg, K. 1995 Effects of clear-cutting and selective felling in Swedish boreal coniferous forest: Response of invertebrate taxa eaten by birds. *Entomologica Fennica* 6: 79-90.
- Andersson, L. and Hytteborn, H. 1991 Bryophytes and decaying wood – A comparison between a managed and a natural forest. *Holarctic Ecology* 14: 121-30.
- Angelstam, P. and Pettersson, B. 1997 Principles of present Swedish forest biodiversity management. *Ecological Abstracts* 46: 191-203.
- Angelstam, P. and Mikusinski, G. 1994 Woodpecker assemblages in natural and managed boreal and hemiboreal forests – A review. *Annals of Fennoscandian Zoology* 31: 157-72.
- Angelstam, P., Rosenberg, P. and Rülcker, C. 1993 Aldrig, Sällan, Ibland, Ofta. *Skog och Forskning* 1: 34-41.
- APHI (Association of Indonesian Concession Holders) 1993a Kriteria kelestarian dalam pengelolaan hutan pada tingkat nasional. APHI, Jakarta, Indonesia.
- APHI 1993b Pembahasan pengelolaan hutan tropika basah secara lestari pada tingkat unit manajemen (HPH). APHI, Jakarta, Indonesia.
- APHI 1995 Kriteria dan indikator penilaian pengelolaan hutan alam produksi secara lestari

- untuk hutan rawa pada tingkat unit manajemen. APHI, Jakarta, Indonesia.
- APHI 1996 Kriteria Dan Indikator Penilaian Pengelolaan Hutan Alam Produksi Secara Lestari Pada Tingkat Unit Manajemen”, APHI, Jakarta, Indonesia.
- APHI 1997 Checklist kriteria dan indikator pengelolaan hutan alam produksi secara lestari. APHI, Jakarta, Indonesia.
- APKINDO (Indonesian Wood Panel Association) 1996 Directory of the Indonesian plywood industry 1996. APKINDO, Jakarta, Indonesia.
- Armson, K.A. 1996 Forest certification and Canadian forestry – An overview and update. *The Forestry Chronicle* 72: 591-4.
- Arnold, T.W. 1990 An analysis of trade policies relating to Indonesia’s forest products. UTF/INS/065/INS: Forestry Studies Field Document No: V-4, GOI/FAO, Ministry of Forestry, Jakarta, Indonesia.
- Aryal, D. 1997 Status report of national and regional certification initiatives. *In*: Elliott, C., WWF Guide to Forest Certification 1997, Appendix. WWF International, Gland, Switzerland.
- Ascher, W. 1993 Political economy and problematic forestry practices in Indonesia: Obstacles to incorporating sound economics and science. The Center for Tropical Conservation, Duke University, Durham, NC.
- AssiDomän 1997 AssiDomän – A presentation. AssiDomän, Stockholm, Sweden.
- AssiDomän 1998 AssiDomän Environmental Report 1997. AssiDomän, Stockholm, Sweden.
- Atkinson M.M. and Coleman, W.D. 1989 Strong states and weak states: Sectoral policy networks in advanced capitalist economies. *British Journal of Political Science* 19: 47-67.
- Aubréville, A. 1938 La forêt coloniale; Les forêts de l’Afrique Occidentale française. *Annales de l’Academie Scientifique Coloniale* 9: 1-245.
- Bach, C.F. and Gram, S. 1993 The tropical timber triangle. Department of Economics and Natural Resources, Royal Veterinary and Agricultural University, Copenhagen, Denmark.
- Baharuddin H.J. and Simula, M. 1994 Certification schemes for all timber and timber products. Report for the International Tropical Timber Organization, Yokohama, Japan.
- Baharuddin, H.J. and Simula, M. 1996 Timber certification in transition: Study on the development in the formulation and implementation of certification schemes for all internationally traded timber and timber products. Report for the International Tropical Timber Organization, Yokohama, Japan.
- Baharuddin, H.J. and Simula, M. 1997 Timber certification: Issues and progress. Report for the International Tropical Timber Organization, Yokohama, Japan.
- BAPEDAL (Environmental Impact Management Agency) 1995a Indonesian environmental policy and programs in ecolabelling and other environmental quality requirements. Paper presented at the International Trade Centre workshop on Ecolabelling, Geneva, 20-23 June 1996.
- BAPEDAL 1995b Press release of 29 December 1995 and background materials on Enterprises Performance Assessment Systems (Proper Prokasih). BAPEDAL, Jakarta, Indonesia.
- Barber, C., Johnson, N. and Hafild, E. 1994 Breaking the logjam: Obstacles to forest policy reform in Indonesia and the United States. World Resources Institute, Washington, DC.
- Barke, R.P. 1993 Managing technological change in federal communications policy: The role of industry advisory groups. *In*: Sabatier, P. and Jenkins-Smith, H. (eds) Policy change and learning: An advocacy coalition approach, 129-46. Westview Press, Boulder, CO, and San Francisco, CA.
- Barron, D. 1994 Sustainable forestry certification. Canadian Pulp and Paper Federation, Montreal, Canada.
- Bass, S. and Hearne, R.R. 1997 Private sector forestry: A review of instruments for ensuring sustainability. Forestry and Land Use Series No.11, International Institute for Environment and Development, London, UK.
- Becker, G. 1976 The economic approach to human behaviour. University of Chicago Press, Chicago, IL.
- Bélanger, L. 1997 Forêt Montgomery’s experience with the CSA process. *In*:

- Proceedings of the International Conference on Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, 15. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada. (URL:<http://quarles.unbc.edu/mcgregor/proceedings>)
- Bendall, J. and Sullivan, F. 1996 Sleeping with the enemy? Business-environmentalist partnerships for sustainable development. The case of the WWF 1995 Group. *In*: Aspinall, R. and Smith, J. (eds) Environmentalist and business partnerships: A sustainable model? A critical assessment of the WWF-UK 1995 Group, 3-33. Cambridge Environmental Initiative Professional Seminar Series, The White Horse Press, Cambridge, UK.
- Bennett, C., Elliott, J. and Septiani, A. 1997 Forest certification and ecolabelling of Indonesian forest products: Prospects and policy challenges. Report number 77, Natural Resources Management Project/National Planning Agency, Ministry of Forestry and USAID, Jakarta, Indonesia.
- Berg, S. and Olszewski, R. 1995 Certification and labelling: A forest industry perspective. *Journal of Forestry* 93(4): 30-2.
- Biggs, S.D. and Neame, A. 1994 NGOs negotiating room for manoeuvre: Reflections concerning autonomy and accountability within the new policy agenda. Avocado Series, Olive Information Service, University of East Anglia, Norwich, UK
- Bills, D. 1997 Timber certification. *Institute of Chartered Foresters News (UK)*, January 1997, p 3.
- Binkley, C. 1997 A cross road in the forest: The path to a sustainable forest sector in British Columbia, in Barnes, T.J. and Hayter, R. (eds) *Troubles in the rainforest: British Columbia's economy in transition*, 15-34. Western Geographical Press, Victoria, BC, Canada.
- Bisnis Indonesia 1997 7 HPH diberi hak sahkan sendiri RKT, Jakarta, Indonesia.
- Bonar, R. 1997 SFM indicators for the Weldwood Hinton forest management area. *In*: Proceedings of the International Conference on Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, 158-63. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada. (URL:<http://quarles.unbc.edu/mcgregor/proceedings>)
- Bourgeois, B. 1997 Lignum Good Stewardship Program. *In*: Proceedings of the International Conference on Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, 147-56. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada. (URL:<http://quarles.unbc.edu/mcgregor/proceedings>).
- Brewer, G. and de Leon, P. 1983 Foundations of policy analysis. Dorsey Press, Homewood, CA.
- Brisbane (International Conference on Certification and Labelling of Products From Sustainably Managed Forests) 1996a Abstracts. Department of Primary Industries and Energy and the Department of the Environment, Sport and Territories, Brisbane, Queensland, Australia.
- Brisbane 1996b Conclusions of the International Conference on Certification and Labelling of Products from Sustainably Managed Forests. Department of Primary Industries and Energy and the Department of the Environment, Sport and Territories, Brisbane, Queensland, Australia.
- Brock, K. 1996 Lifting impressions: Interest groups, the Provinces, and the Constitution. *In*: Dunn, C. (ed.) *Provinces: Canadian Provincial Politics*, 95-122. Broadview Press, Peterborough, Ontario, Canada.
- Brockman, K.L., Hemmelskamp, J. and Hohmeyer, O. 1996 Certified tropical timber and consumer behaviour. Zentrum für Europäische Wirtschaftsforschung GmbH, Mannheim, Germany
- Brown, A.E. and Stewart, J.S. 1993 California water politics: Explaining policy change in a cognitively polarized subsystem. *In*: Sabatier, P. and Jenkins-Smith, H. (eds.) *Policy change*

- and learning: An advocacy coalition approach, 105-28. Westview Press, Boulder, CO, and San Francisco, CA.
- Bryman, A. 1984 The debate about quantitative or qualitative research; a question of method or epistemology? *British Journal of Sociology* 35: 75-92.
- Burrell, T. 1997 CSA environmental standards writing: Identifying constraints to environmental NGO involvement. Canadian Institute for Environmental Law and Policy, Ottawa, Ontario, Canada.
- C. Elliott and Gholz, H. (eds) 1996 *Certification of forest products: Issues and perspectives*. Island Press, Washington, DC.
- Cabarle, B. 1996 Accreditation of four certifiers. FSC Notes 1(2). Forest Stewardship Council, Oaxaca, Mexico.
- Cajazeira, J. 1996 Empreza da papel faz a defesa da ISO 14001. *In: O Papel*, Volume 5, 102. Associacao Brasileira Técnica de Celulosa e Papel, Brazil.
- Capra, F. and Pauli, G. 1995 The challenge. *In: Capra, F. and Pauli, G. (eds) Steering business toward sustainability*, 1-14. United Nations University Press, Tokyo, Japan.
- Carette, J. 1994 Second Canadian intervention. ITTO Working Party on Certification of all Timber and Timber Products, Cartagena, Colombia, May 12, 1994. *In: Report of the Working Party on Certification of all Timber and Timber Products*, 11-14. ITTO, Yokohama, Japan.
- Carrere, R. and L. Lohmann 1996 *Pulping the South: Industrial tree plantations and the world paper economy*. Zed Books Ltd, London, UK.
- Casley, D.J. and Kumar, K. 1988 The collection, analysis and use of monitoring and evaluation data. Johns Hopkins Press, Baltimore, MD.
- Cassels, D. 1995 Considerations for effective international cooperation in tropical forest conservation and management. *In: Sandbukt, O. (ed.) Management of tropical forests: Towards an integrated perspective*, 357-75. Centre for Development and the Environment, University of Oslo, Norway.
- Cater, M. 1997 Cited in Foot, R. Timber land. *New Brunswick Reader*, 17 February 1996, 4-9. Saint John, New Brunswick, Canada.
- CCFM (Canadian Council of Forest Ministers) 1992 *Sustainable forests: A Canadian commitment*. CCFM, Hull, Quebec, Canada.
- CCFM 1994 *Compendium of Canadian Forestry Statistics 1994*. National Forestry Database, CCFM, Ottawa, Ontario, Canada.
- CEN (Canadian Environmental Network) (1996a) *Canadian NGOs reject Canadian Standards Association sustainable forest management system*. CEN, Ottawa, Ontario, Canada.
- Centeno, J. 1996 *The elusive credibility of forest management certification claims*. Unpublished report, Merida, Venezuela.
- CFS (Canadian Forest Service) 1994a *The State of Canada's Forests: Forests A Global Resource*. Natural Resources Canada, Canadian Forest Service, Ottawa, Ontario, Canada.
- CFS 1994b *The state of Canada's forests 1993*. Natural Resources Canada, Canadian Forest Service, Ottawa, Ontario, Canada.
- CFS 1995 *The state of Canada's forests: A balancing act*. Natural Resources Canada, Canadian Forest Service, Ottawa, Ontario, Canada.
- CFS 1996 *The state of Canada's forests: Sustaining initiatives at home and abroad*. Natural Resources Canada, Canadian Forest Service, Ottawa, Ontario, Canada.
- CFS 1997 *The state of Canada's forests: Learning from history*. Natural Resources Canada, Canadian Forest Service, Ottawa, Ontario, Canada.
- CGIF (Consultative Group on Indonesian Forestry) 1996 *Objectives and process of implementation*. CGIF, Jakarta, Indonesia.
- Chandrasekharan, C. 1990 *Some issues relevant to natural forest management in Indonesia*. Paper given at ASEAN seminar on The Management of Tropical Forests for Sustainable Development, Jakarta, 24-25 January 1990.
- CIFOR (Center for International Forestry Research) 1998 *The Indonesian economic crisis: How will it affect the forest sector?* News Update, 18 February 1998, CIFOR, Bogor, Indonesia.
- Clancy, P. and Sandberg, L.A. 1998 *Formulating standards for sustainable forest management*

- in Canada. Unpublished manuscript, Department of Political Science, St. Francis Xavier University, Nova Scotia, Canada.
- Clayoquot Sound Scientific Panel 1995 Sustainable forest management in Clayoquot Sound: Planning and practices. Report 5, Clayoquot Sound Scientific Panel, British Columbia, Canada.
- Cobb, R. 1973 The belief systems perspective. *Journal of Politics* 35: 121-53.
- Cohen, M., March, J. and Olsen, J.P. 1972 A garbage can model of organizational choice. *Administrative Science Quarterly* 17: 1-25.
- Colchester, M. and Lohmann, L. 1990 The Tropical Forestry Action Plan: What progress? World Rainforest Movement, Penang, Malaysia.
- Coleman, W.D. 1988 Business and politics: A study of collective action. McGill-Queens Press, Montreal, Quebec, Canada.
- Collins, M., Sayer, J. and Whitmore, T. (eds) 1991 The conservation atlas of tropical forests of Asia and the Pacific. Macmillan Press Ltd, London and Basingstoke, UK, for IUCN, Gland, Switzerland.
- Consensus Magazine 1996 Court-ordered ISO 14001 registration could set precedent. May 1996, p 9.
- Cook, G., Downes, D., Van Dyke, B. and Weiner, J.B. 1997 Applying trade rules to timber ecolabelling: A review of timber ecolabelling and the WTO Agreement on Technical Barriers to Trade. Center for International Environmental Law, Washington, DC.
- CPPA (Canadian Pulp and Paper Association) 1994 Reference tables. CPPA, Montreal, Quebec, Canada.
- CPPA 1996 Sustaining the earth's forests...A CPPA perspective on selected forest issues. CPPA Statement for the Third session of the Intergovernmental Panel on Forests, CPPA Montreal, Quebec, Canada.
- Crossley, R. 1995 A review of global forest management certification initiatives: Politects. Background paper prepared for the University of British Columbia/Agricultural University of Malaysia Conference on Certification, Kuala Lumpur, May 1996.
- CSA (Canadian Standards Association) 1994a Minutes of the 15th July meeting of the SFM Technical Committee. CSA, Toronto, Ontario, Canada.
- CSA 1994b Minutes of the 25 August meeting of the SFM Technical Committee. CSA, Toronto, Ontario, Canada.
- CSA 1995a CSA Update on the Sustainable Forest Management Project", 17 April 1995. CSA, Toronto, Ontario, Canada.
- CSA 1995b Minutes of the December 4-6 meeting of the SFM Technical Committee. CSA, Toronto, Ontario, Canada.
- CSA 1995c Minutes of the 2-3 March meeting of the SFM Technical Committee. CSA, Toronto, Ontario, Canada.
- CSA 1995d Minutes of the July 17-19 meeting of the SFM Technical Committee. CSA, Toronto, Ontario, Canada.
- CSA 1995e A Sustainable Forest Management System: Overview document. Z808, 25 August 1995. CSA, Toronto, Ontario, Canada.
- CSA 1995f Minutes of the December 4-6 meeting of the SFM Technical Committee. CSA, Toronto, Ontario, Canada.
- CSA 1996a CAN/CSA-Z808-96 A Sustainable Forest Management System: Guidance document. CSA, Toronto, Ontario, Canada.
- CSA 1996b CAN/CSA-Z809 A Sustainable Forest Management System: Specifications document. CSA, Toronto, Ontario, Canada.
- CSFCC (Canadian Sustainable Forestry Certification Coalition) 1996 Canada's forest industry welcomes national sustainable forest management standards. Press release, 29 October 1996. CSFCC, Montreal, Quebec, Canada.
- CSFCC 1997a Towards sustainable forest management certification. CSFCC, Montreal, Quebec, Canada.
- CSFCC 1997b Sustainable forest management certification in Canada: Questions and answers. CSFCC, Montreal, Quebec, Canada.
- Cubbage, F.W., O'Laughlin, J. and Bullock, C.S. 1993 Forest resource policy. John Wiley and Sons, New York, NY.
- da Motta Veiga, P., de Carvalho, M.C., Vilmar, M.L. and Facanha, H. 1994 Eco-labelling

- systems in the European Union and their impacts on Brazilian exports of three industrial sectors. Paper presented at the UNCTAD (United Nations Conference on Trade and Development) Workshop on International Trade and Labelling, June 1994. UNCTAD, Geneva, Switzerland.
- Daily Mail (UK) 1995 Shell U-turn sinks Major. 21 June 1995.
- Davis, J.J. 1992 Ethics and environmental marketing. *Journal of Business Ethics* 11: 81-7.
- Dellert, L.H. 1994 Sustained yield forestry in British Columbia: The making and breaking of a policy (1990-1993). Master thesis in Environmental Studies, York University, North York, Ontario, Canada.
- Demont, J. 1992 Citizen Irving: K.C. Irving and his legacy. McClelland & Stewart, Toronto, Ontario, Canada.
- Dick, J. 1991 Forest land use, forest use zonation and deforestation in Indonesia. Background paper to UNCED for the Indonesian State Ministry for Population and Environment and the Environmental Impact Management Agency, Jakarta, Indonesia.
- Dixon, J.A. and Fallon, L.A. 1989 The concept of sustainability: Origins, extensions and usefulness for policy. *Society and Natural Resources* 2: 73-84.
- Djamiludin, S. 1994 Keynote address. *In: Proceedings of the International Conference on Forest Product Certification Scheme, Puncak, Indonesia, 14-17 September 1994, 201-4.* RMI, Bogor, Indonesia.
- DN (Dagens Nyheter) 1995 Skogsbolagens enighet spricker. 6 June 1995.
- Doern, G.B. and Wilson, V.S. 1974 Issues in Canadian public policy. MacMillan, Toronto, Ontario, Canada.
- Donovan, R. 1994 The evaluation of forest management certification and forest auditing since 1990, and thoughts on the current 'state of the art'. *In: Proceedings of the International Conference on Forest Product Certification Scheme, Puncak, Indonesia, 14-17 September 1994, 116-26.* RMI, Bogor, Indonesia.
- Droogsmma, W.D., Jans, J.H. and Uylenberg, R. 1994 Legal means for restricting the import of non-sustainably produced (tropical) timber: Aspects of international and European law. Centre for Environmental Law, University of Amsterdam, The Netherlands.
- Dror, Y. 1967 Policy analysts: A new professional role in government service. *Public Administration Review* 27: 200-27.
- Dudley, N., Elliott, C. and Stolton, S. 1997 A framework for environmental labelling. *Environment* 39(6): 16-25.
- Dudley, N., Jeanrenaud, J.-P. and Sullivan, F. 1995 Bad harvest: The timber trade and the degradation of the world's forests. Earthscan Publications, London, UK.
- Duerr, W.A. and Duerr, J.B. 1975 The role of faith in forest resource management. *In: Rumsey, F. and Duerr, W.A. (eds) Social sciences in forestry: A book of readings, 30-41.* W.B. Saunders, Philadelphia, PA.
- Durand, F. 1993a Trois siècles dans l'Île du Teck: Les politiques forestières aux Indes Néerlandaises (1602-1942). *Revue Française d'Histoire d'Outre-Mer* LXXX (299): 251-305.
- Durand, F. 1993b De la sylvie aux plantations d'eucalyptus: 25 ans de gestion forestière en Indonésie (1967-1992). *In: L'Indonésie et son nouvel ordre*, 191-217. Archipel 46, CNRS, Paris, France.
- Durand, F. 1994 Les forêts en Asie du sud-est: Recul et exploitation. Editions L'Harmattan, Paris, France.
- Durrant, R.F. and Diehl, P.F. 1989 Agendas, alternatives and public policy: Lessons from the US foreign policy arena. *Journal of Public Policy* 9: 179-205.
- Dwima Group 1992 Annual report. Dwima, Jakarta, Indonesia.
- Easton, D. 1965 A systems analysis of political life. John Wiley and Sons, New York, NY.
- EBRI (Economic and Business Review Indonesia) 1994 Number 98, 26 February 1996, Jakarta, Indonesia.
- EC (European Commission) 1992 Towards sustainability: A new community programme of policy and action in relation to the environment and sustainable development, proposed by the community. EC, Brussels, Belgium.

- Eckerberg, K. 1987 Environmental protection in Swedish forestry: A study of the implementation process. Department of Political Science, University of Umea, Sweden.
- Eckerberg, K. 1994 Consensus, conflict or compromise? The Swedish case. *In*: Eckerberg, K., Mydske, P.K., Niemi-Ilahti, A. and Pedersen, K.H. (eds) Comparing Nordic and Baltic countries: Environmental problems and policies in agriculture and forestry, 76-97. Nordic Council of Ministers, Copenhagen, Denmark.
- Eckerberg, K. 1996 Swedish forestry policy and environmental sustainability. Paper presented to the Conference on Environmental Issues in Canada and Sweden, York University, Ontario, 15-17 May 1996.
- EEB (European Environmental Bureau) 1995 ISO 14001: An uncommon perspective. EEB, Brussels, Belgium.
- Eglin, R. 1996 WTO comments on ISO/DIS 14001 Environmental labels and declarations – General principles. World Trade Organization, Geneva, Switzerland.
- Eisen, M. 1997 Environmental marketing and forest products certification – Challenges and opportunities. *In*: Proceedings of the International Conference on Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, 70. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada (URL:<http://quarles.unbc.edu/mcgregor/proceedings>).
- EIU (Economist Intelligence Unit) 1996 Canada: Country Profile 1996-1997. EIU, London, UK.
- EIU 1997a Indonesia: Country Profile 1996-1997. EIU, London, UK.
- EIU 1997b Indonesia Country Report, 1st Quarter 1997. EIU, London, UK.
- Ekelund, H. and Dahlin, C.G. 1997 Development of the Swedish forests and forest policy during the last 100 years. National Board of Forestry, Jönköping, Sweden.
- Elghorn, A. 1998 SIA 1998 – Overview of the Swedish forest industry. Swedish Forest Industries Association, Stockholm, Sweden.
- Elliott, C. and Hackman, A. 1996 Current issues in forest certification in Canada. WWF-Canada, Toronto, Canada.
- Elliott, C. and Sullivan, F. 1991 Incentives and sustainability: Where is ITTO going?. Position paper, WWF International, Gland, Switzerland.
- Elmore, R.F. 1985 Forward and backward mapping: Reversible logic in the analysis of public policy. *In*: Hanf, K. and Toonen, T.A.J. (eds) Policy implementation in federal and unitary systems, 33-71. Martinus Nijhoff Publishers, Dordrecht, The Netherlands.
- Elmore, R.F. 1987 Instruments and strategy in public policy. *Policy Studies Review* 7: 174-86.
- EPA (United States Environmental Protection Agency) 1993 Status report on the use of environmental labels worldwide. Office of Pollution Prevention and Toxics, EPA Report 742-R-9-93-001, Washington, DC.
- Erickson, L., Hansson, L. and Ingelög, T. 1983 Remnant biotopes in production landscapes. How to preserve intact natural communities. Swedish Environmental Protection Agency, Solna Research Station, Sweden.
- Ervin, J. 1996 FSC members ratify plantation principle. *FSC Notes* 1(3): 1, 11. Forest Stewardship Council, Oaxaca, Mexico.
- Ervin, J. and Pierce, A. 1996 Status report on forest certification in the United States. Forest Stewardship Council US Initiative, Waterbury, VT.
- Esseen, P.-A., Ehnström, B., Ericson, L. and Sjöberg, K. 1997 Boreal Forests. *Ecological Abstracts* 46: 16-47.
- Fanzeres, A. 1996 Forest Activists. *In*: Viana, V., Ervin, J., Donovan, R.Z., Elliott, C. and Gholz, H. (eds) Certification of forest products: Issues and perspectives, pp 183-185. Island Press, Washington, DC.
- FAO (Food and Agriculture Organization of the United Nations) 1982 Tropical forest resources. FAO Forestry Paper 30, FAO, Rome, Italy.
- FAO 1990 Possible main elements of an instrument (convention, agreement, protocol, charter) for the conservation and development of the world's forests. FAO, Rome, Italy.

- FAO 1994 Report on forests: Agenda 21, Chapter 11: Combatting deforestation and the forest principles. Report of the UN Secretary General to the Commission on Sustainable Development, FAO (Task Manager), Rome, Italy.
- FAO 1995 Forest resources assessment 1990: Global synthesis. FAO Forestry Paper 124, FAO, Rome, Italy.
- FAO 1997a Forest products certification", Forestry Information Notes, March 1997. FAO, Rome, Italy.
- FAO 1997b State of the world's forests. FAO, Rome, Italy.
- FAO/ITTO (International Tropical Timber Organization) 1995 Report of the FAO/ITTO Expert Consultation on Harmonization of Criteria and Indicators for Sustainable Forest Management. FAO, Rome, Italy.
- Fenger, M. 1996 Implementing biodiversity conservation through the British Columbia Forest Practices Code. *Forest Ecology and Management* 85: 67-77.
- FME (Forest Movement Europe) 1996 NGO Statement. FME, Brussels, Belgium.
- FOE (Friends of the Earth) and WRM (World Rainforest Movement) 1992 The International Tropical Timber Agreement: Conserving the forests or chainsaw charter? A Critical review of the first five years' operation of the International Tropical Timber Organization. FOE-UK, London, UK.
- Ford, D. 1997 The US forest products buyers' group. Paper presented at the International Conference on Certification, Criteria and Indicators: Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, by the Canadian Institute of Forestry.
- Forestry Canada 1991 Model forests: Background information and guidelines for applicants. Forestry Canada, Hull, Quebec, Canada.
- Fraser, A., Muljadi, A. and Ardjoyuwono, S. 1995 Establishment of production forest management units (KPHP). UK-Indonesia Tropical Forest Management Project, Jakarta, Indonesia.
- FSAC (Forest Sector Advisory Coalition) 1992 Canada's forest industry: A strategy for growth. FSAC, Toronto, Ontario, Canada.
- FSC (Forest Stewardship Council) 1994a FSC statutes. FSC, Oaxaca, Mexico.
- FSC 1994b FSC principles and criteria. FSC, Oaxaca, Mexico.
- FSC 1995 FSC Accreditation programme: Manual for evaluation and accreditation of certification bodies. Draft 3.0 for review, FSC, Oaxaca, Mexico.
- FSC 1996a FSC Accreditation programme: Manual for evaluation and accreditation of certification bodies. FSC document 2.1, FSC, Oaxaca, Mexico.
- FSC 1996b Minutes of the first General Assembly, 27-28 June 1996, Oaxaca. FSC, Oaxaca, Mexico.
- FSC 1996c FSC registers accreditation logo. FSC Notes 1(2): 1. FSC, Oaxaca, Mexico.
- FSC 1996d Worldwide hopes for accreditation. FSC Notes 1(2): 1. FSC, Oaxaca, Mexico.
- FSC 1997a FSC members' short report. FSC document 4.1, 11 August 1997, FSC, Oaxaca, Mexico.
- FSC 1997b Forests certified by FSC-accredited certification bodies. FSC document 5.3.3 (4.3), 25 September 1997, FSC, Oaxaca, Mexico.
- FSC 1997c Names and addresses of FSC-endorsed contact persons. FSC document 5.1.2 (4.4.2), FSC, Oaxaca, Mexico.
- FSC 1997d NGO fury over isoroy certificates. FSC Notes 1(5): 1. FSC, Oaxaca, Mexico.
- FSC 1997e FSC board decision on percentage-based claims. FSC document 3.6.3, FSC, Oaxaca, Mexico.
- FSC 1998a Certified forest sites endorsed by FSC, 30 June 1998. FSC, Oaxaca, Mexico.
- FSC 1998b FSC endorses Swedish national forest standard. Press release, 26 January 1998. FSC; Oaxaca, Mexico.
- FSC 1998c List of forests certified by FSC-accredited certification bodies, 21 January 1998. FSC, Oaxaca, Mexico.
- FT (Financial Times) 1998a North American pulp friction. 11 March 1998.
- FT 1998b MacMillan Bloedel bows to pressure from Greenpeace. 19 June 1998.
- FT 1998c Province in talks on anti-logging campaign. 8 May 1998.

- Gale, F. 1996 The ecological political economy of global environmental cooperation: A case study of the International Tropical Timber Organization in the making of the tropical timber trade regime. PhD Dissertation, Carleton University, Ottawa, Ontario, Canada.
- Gale, F. and Burda, C. 1996 Attitudes towards eco-certification in the BC forest products industry. Eco-Research Chair, Faculty of Law and Environmental Studies Programme, University of Victoria, Canada.
- Gameson, W. 1990 The strategy of social protest, 2nd edition. Wadsworth Publishing Company, Belmont, CA.
- Gamlin, L. 1988 Sweden's factory forests. *New Scientist*, January 1988, pp 28-32.
- Ghazali, B. and Simula, M. 1994 Certification schemes for all timber and timber products. Report to ITTO, Yokohama, Japan.
- GII (German-Indonesian Initiative) 1996 Report of the International Experts Working Group Meeting on Trade, Labelling of Forest Products and Certification of Sustainable Management. GII, Bonn, Germany.
- Gillis, M. 1988 The logging industry in tropical Asia. In: Denslow, J. and Padoch, C. (eds) *People of the tropical rainforest*, 177-84. University of California Press, Berkeley, CA.
- Globe and Mail 1995 Forest industry assails BC policies. 29 September 1995, Toronto, Ontario, Canada.
- Globe and Mail 1997a Greenpeace loses support for BC logging protests. 23 June 1997, Toronto, Ontario, Canada.
- Globe and Mail 1997b BC hemlock faces boycott. 14 November 1997, Toronto, Ontario, Canada.
- Glück, P. 1987 Social values in forestry. *Ambio* 16: 158-60.
- Glück, P. 1995 Evolution of forest policy science in Austria. In: Solberg, B. and Pelli, P. (eds) *Forest policy analysis – Methodological and empirical aspects*, 51-62. European Forest Institute, Joensuu, Finland.
- Glück, P. 1997 European forest politics in process. Paper presented at the European Forest Research Institute research forum on Future Forest Policy in Europe: Balancing Economic and Ecological Demands, 15-18 June 1997, Joensuu, Finland.
- Glück, P., Tarasofsky, R.G., Byron, N. and Tikkanen, I. 1997 Options for strengthening the international legal regime for forests. Background report prepared for the European Commission, European Forest Institute, Joensuu, Finland.
- GNB (Government of New Brunswick) 1993 Government response to the final report of the Commission on Land Use and the Rural Environment. GNB, Fredericton, New Brunswick.
- GOC (Federal, Provincial and Territorial Governments of Canada) 1996 Position paper: Framework of guiding principles for voluntary certification systems for sustainable forest management. Ottawa, Ontario, Canada.
- GOI (Government of Indonesia) 1995 Economic development and sustainable development: Forestry management in Indonesia. Issues and perspectives. Ministry of Forestry, Jakarta, Indonesia.
- GOI/FAO 1990 Situation and outlook of the forestry sector in Indonesia. UFT/INS/065/INS: Forestry Studies, Technical Report Number 1, Volume 4, Ministry of Forestry, Jakarta, Indonesia.
- GOI/FAO 1996 Final forest resources statistics report. UFT/INS/066/INS National Forest Inventory, Field Document Number 55, Ministry of Forestry, Jakarta, Indonesia.
- GOI/IIED (International Institute for Environment and Development) 1985 A review of policies affecting the sustainable development of forest lands in Indonesia, Volume 3. Ministry of Forestry, Jakarta, Indonesia.
- Goodland, R. and Daly, H. 1996 If tropical log export bans are so perverse, why are there so many? *Ecological Economics* 18: 189-96.
- Grace, J., Lloyd, J., McIntyre, J., Miranda, A.C., Meir, P., Miranda, H.S., Nobre, C., Moncrieff, J., Massheder, J., Malhi, Y., Wright, I. and Gash, J. 1995 Carbon dioxide uptake by an undisturbed tropical rainforest in southwest Amazonia, 1992-1993. *Science* 20: 778-80.
- Granholm, H., Vähänen, T. and Sahlberg, S. 1996 Background document: Intergovernmental

- seminar on criteria and indicators for sustainable forest management. Ministry of Agriculture and Forestry, Helsinki, Finland.
- Grimes, A., Loomis, S., Jahnige, P., Burnham, M., Onthank, O., Alarcon, R., Palacios Cuenca, W., Ceron Martinez, C., Niell, D., Balick, M., Bennett, B. and Mendelsohn, R. 1994 Valuing the rain forest: The economic value of non-timber forest products in Ecuador. *Ambio* 123: 405-20.
- Grindle, M.S. 1980 *Politics and policy implementation in the Third World*, Princeton University Press, Princeton, NJ.
- Griss, P. 1998 *A cut above: Canadian forest products companies struggle to meet their own standard*. Tomorrow Magazine, London, UK.
- Gunn, G. 1997 Tetra Pak UK and the WWF 1995 plus Group. Paper presented at Tetra Pak Europe Environment Seminar, 10 September 1997, Pully, Lausanne, Switzerland.
- Haas, P. M. 1992 Introduction: Epistemic communities and international policy coordination. *International Organization* 46: 1-35.
- Hadenius, S. 1997 *Swedish politics during the 20th century – Conflict and consensus*, Svenska Institutet, Stockholm, Sweden.
- Hafild, E. 1996 Comments and suggestions for ecolabelling criteria to achieve sustainable forest management. WALHI, Jakarta, Indonesia.
- Haley, D. and Lucert, M.K. 1990 *Forest tenures in Canada: A framework for policy analysis*. Forestry Canada, Information Report E-X-43, Canadian Forest Service, Ottawa, Ontario, Canada.
- Hansen, E. and Punches, J. 1998 *Collins pine: Lessons from a pioneer. Case study from "The business of sustainable forestry"*, The John D. and Catherine T. MacArthur Foundation, Chicago, IL.
- Hansen, E., Fletcher, R. and McAlexander, J. 1998 *Sustainable forestry, Swedish style for Europe's greening market*. *Journal of Forestry* 96(3): 38-43.
- Hasan, M. 1991 *The Indonesian wood panel industry*. *Unasyilva* 167(42): 11-15.
- Hasan, M. 1992 *The future role of Dipterocarps in Indonesian forestry: Industry's viewpoint*. Paper presented at Indonesian Forestry Community seminar, Balikpapan, November 1992.
- Hasanuddin, L. 1996 *Mitos-mitos pengelolaan hutan di Indonesia*. Keras posis 2, WALHI, Jakarta, Indonesia.
- Hauselmann, P. 1996 *ISO inside out: ISO and environmental management*. WWF International Discussion Paper, Gland, Switzerland.
- Hayter, R. and Barnes, T.J. 1997 *Troubles in the rainforest*. In: Barnes, T.J. and Hayter, R. (eds) *Troubles in the rainforest: British Columbia's forest economy in transition*, 1-11. Western Geographical Press, Victoria, British Columbia, Canada.
- Hecló, H. 1974 *Social policy in Britain and Sweden*. Yale University Press, New Haven, CT.
- Hecló, H. 1978 *Issue networks and the executive establishment*. In: King, A.(ed.) *The new American political system*, 87-134. American Enterprise Institute, Washington, DC.
- Hessing, M. and Howlett, M. 1997 *Canadian natural resource and environmental policy: Political economy and public policy*. UBC Press, Vancouver, British Columbia, Canada.
- Higginbotham, K. 1997 *CSA case study: Canfor northern operations*. In: *Proceedings of the International Conference on Global Approaches to Sustainable Forest Management*, 21-26 September 1997, Prince George, British Columbia, 164. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George (URL:<http://quarles.unbc.edu/mcgregor/proceedings>).
- Hoberg, G. 1996a *Putting ideas in their place: A response to "Learning and change in the British Columbia forest policy sector"*. *Canadian Journal of Political Science* XXIX: 135-44.
- Hoberg, G. 1996b *The politics of sustainability: Forest policy in British Columbia*. In: Carty, R.K. (ed.) *Politics, policy and government in British Columbia*, 272-89. UBC Press, Vancouver, BC, Canada.

- Hogwood, B.W. and Peters, G.B. 1983 Policy dynamics. St Martin's, New York, NY.
- Hogwood, B.W and Gunn, L.A. 1984 Policy analysis for the real world. Oxford University Press, Oxford, UK.
- House of Commons 1996 Fourth report of the Environment Committee: World trade and the environment. House of Commons, London, UK.
- Howard, A.H. and Majid, N.M. 1996 Synthesis of the findings from the UBC-UPM Conference on Ecological, Political and Social Issues in Forest Management Certification. *In: Proceedings of the UBC-UPM Conference on the Ecological, Social and Political Issues of the Certification of Forest Management*, 7-23. Faculty of Forestry, UBC, Vancouver, BC, Canada.
- Howlett, M. 1991 Policy instruments, policy styles and policy implementation: National approaches to theories of instrument choice. *Policy Studies Journal* 19: 1-21.
- Howlett, M. 1998 Policy learning and policy change: Reconciling knowledge and interests in the policy process. Paper presented to the Conference on National Forest Policies, 20 May 1998, University of Freiburg, Germany.
- Howlett, M. and Rayner, J. 1995 The framework of forest policy in Canada. *In: Ross, M. (ed.) Forest management in Canada*, 43-110. Canadian Institute of Resources Law, University of Calgary, Alberta, Canada.
- Howlett, M. and Brownsey, K. 1996 From timber to tourism: The political economy of British Columbia. *In: Carty, R.K. (ed.) Politics, policy and government in British Columbia*, 18-31. UBC Press, Vancouver, BC, Canada.
- Hummel, M. 1994 Letter to Mr Ahmad Husseini re. Technical Committee on Sustainable Forest Management", October 4, 1994, WWF Canada, Toronto.
- Humphreys, D. 1996a Forest politics: The evolution of international cooperation. Earthscan Publications Ltd., London, UK.
- Humphreys, D. 1996b Regime theory and non-governmental organizations: The case of forest conservation. *Journal of Commonwealth and Comparative Politics* 34: 90-115.
- Hurst, P. 1990 Rainforest politics: Ecological destruction in Southeast Asia. Zed Books Ltd, London, UK.
- IES (International Environmental Systems) 1995a American forestry group adds objections. *International Environmental Systems Update* 2(7): 12. IES, Virginia.
- IES 1995b Forest industry proposal threatens to disrupt TC 207 mission. *International Environmental Systems Update* 2(6): 1. IES, Virginia.
- IHT (International Herald Tribune) 1997a Smoky Southeast Asia. Editorial, 29 September, Paris, France.
- IHT 1997b Reading Suharto's mind via financier. 24 March, Paris, France.
- IHT 1998 Indonesia's pushes party reform: He says policies have failed to stem crisis. 10 July, Paris, France.
- IIED (International Institute for Environment and Development) 1996 Towards a sustainable paper cycle. ICED, London, UK.
- IISD (International Institute for Sustainable Development) 1996 Countdown Forests '97. A briefing series of the International Institute for Sustainable Development, 2(September): 1.
- Indufor Oy 1997 Options for international institutional arrangements in certification of forest management and implications for ACP countries. Independent study report commissioned by the European Commission, Directorate General for Development (DGVII/A/I), Indufor Oy, Helsinki, Finland.
- Innes, M.R. 1994 Perspective on Eastern Canada's timber supply. *In: Canadian Forest Service, Timber supply in Canada: Challenges and choices*, 72-5. CFS, Hull, Quebec, Canada.
- Irving, J.K. 1996 Cited by Bustos, A. in 'World's partiers already prepared'. *The Telegraph Journal*, 31 December 1996, Fredericton, New Brunswick, Canada.
- ISO (International Organization for Standardization) 1994 Guide of good practice for standardization (Guide 59, Clause 6.1). ISO, Geneva, Switzerland.
- ISO 1995a Minutes of the ISO/TC207 meeting #3, Oslo, Norway, June 1995. ISO/TC207 N90

- Standards Council of Canada, Ottawa, Ontario, Canada.
- ISO 1995b New work item proposal N76: Guide to the application of ISO 14001 in the forestry sector for sustainable forest management. ISO TC207, Geneva, Switzerland.
- ISO 1996a ISO 14001 Environmental Management Systems – General guidelines on principles, systems and supporting techniques. ISO, Geneva, Switzerland.
- ISO 1996b ISO 14004 Environmental Management Systems – Specifications with guidance for use. ISO, Geneva, Switzerland.
- ISO 1996c Report of the informal study group on sustainable forest management to ISO/TC207. ISO/TC207 N124, Geneva, Switzerland.
- ISO 1996d Minutes of the ISO/TC207 meeting #4, Rio de Janeiro, June 1996. ISO/TC207 N131 Standards Council of Canada, Ottawa, Ontario, Canada.
- ISO 1996e ISO Bulletin, November 1996, ISO, Geneva, Switzerland.
- ISO 1996f ISO 14001 Environmental Management Systems – Specifications with Guidance for Use. ISO, Geneva, Switzerland.
- ISO 1997a Memento 1997. ISO, Geneva, Switzerland.
- ISO 1997b Publicising your ISO 9000 or ISO 14000 certification. ISO, Geneva, Switzerland.
- ISO 1997c The ISO 14001 Environment. ISO, Geneva, Switzerland.
- ISO 1997d Minutes of the ISO/TC207 meeting #5, Kyoto, Japan, April 19 and 25. ISO/TC207 N187, Standards Council of Canada, Ottawa, Ontario, Canada.
- ISO 1997e Draft international standard: Environmental labels and declarations-General principles. ISO/TC207/SC3/WG3N40, Standards Australia, Homebush, NSW, Australia.
- ISO 1998 ISO/TR 14061 information to assist forestry organizations in the use of ISO 14001 and ISO 14004 Environmental Management System standards. ISO, Geneva, Switzerland.
- ISO/CASCO(Committee on Conformity Assessment) 1997 Confirmed report of the second meeting of CASCO WG 12 ‘Use of marks of Conformity’. ISO, Geneva, Switzerland.
- ISO/IEC (International Electrotechnical Commission) 1991 Guide 2. ISO/IEC, Geneva, Switzerland.
- ITTA (International Tropical Timber Agreement) 1983 *see under* UNCTAD 1984)
- ITTA 1994 *see under* UNCTAD 1994)
- ITTO (International Tropical Timber Organization) 1990a ITTO Action plan: Criteria and priority areas for programme development and project work.. ITTO, Yokohama, Japan.
- ITTO 1990b ITTO guidelines on the sustainable management of natural tropical forests. ITTO Technical Series 5, Yokohama, Japan.
- ITTO 1991 Pre-project report on incentives in producer and consumer countries to promote sustainable development of tropical forests. ITTO, Yokohama, Japan.
- ITTO 1992a Criteria for the measurement of sustainable tropical forest management. ITTO Policy Document Series No. 3, Yokohama, Japan.
- ITTO 1992b Annual review and assessment of the world tropical timber situation. ITTO, Yokohama, Japan.
- ITTO 1993a ITTO guidelines for the establishment and sustainable management of planted tropical forests. ITTO Policy Development Series 4, Yokohama, Japan.
- ITTO 1993b ITTO guidelines for the conservation of biological diversity in tropical production forests. ITTO Policy Development Series 5, Yokohama, Japan.
- ITTO 1994 Report of the working party on certification of all timber and timber products, May 1994. ITTO, Yokohama, Japan.
- ITTO 1996 Annual review and assessment of the world tropical timber situation. ITTO, Yokohama, Japan.
- IUCN (International Union for the Conservation of Nature) 1980 World conservation strategy. Published in collaboration with UNEP (United Nations Environment Programme) and WWF (World Wildlife Fund), IUCN, Gland, Switzerland.

- IUCN (The World Conservation Union) 1991 Caring for the earth: A strategy for sustainable living. Published in collaboration with UNEP and WWF, IUCN, Gland, Switzerland.
- IUCN 1995 Letter from, A. Wijgerde, IUCN Netherlands Committee to the Netherlands Normalisatie Institute, June 13, 1995. IUCN Netherlands Committee, Amsterdam, The Netherlands.
- Jakarta Post 1997a Wednesday, 9 July, p1.
- Jakarta Post 1997b Tuesday, 15 July, p3.
- Jakarta Post 1997c Timber firms to take ecolabelling trial. 7 July.
- Jang, C., Nishigami, Y. and Yanagisawa, Y. 1996 Assessment of global forest change between 1986 and 1993 using satellite-derived terrestrial net primary productivity. *Environmental Conservation* 23: 315-21.
- Jenkins-Smith, H.C. and Sabatier, P.A. 1993a The study of public policy processes. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 1-9. Westview Press, Boulder, CO.
- Jenkins-Smith, H.C. and Sabatier, P.A. 1993b The dynamics of policy-orientated learning. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 41-56. Westview Press, Boulder, CO.
- Jenkins-Smith, H.C. and Sabatier, P.A. 1993c Methodological appendix: Measuring longitudinal change in elite beliefs using content analysis of public documents. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 237-57. Westview Press, Boulder, CO.
- Jenkins-Smith, H.C. and St Clair, G.K. 1993 The politics of offshore energy: Empirically testing the Advocacy Coalition Framework. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 149-76. Westview Press, Boulder, CO.
- Jha, V. and Zarilli, S. 1994 Eco-labelling initiatives as potential barriers to trade. *In: OECD Life-cycle management and trade*, 64-76. Organization for Economic Co-operation and Development, Paris, France.
- Johansson, O. 1996 Forestry certification – The Swedish case. *Timber Trades Journal*, 4 May: 24-5.
- Johnson, N. and Cabarle, B. 1993 Surviving the cut: Natural forest management in the humid tropics. World Resources Institute, Washington, DC.
- Johnson, P. 1997 CSA registration (certification) audit system. Proceedings of the International Conference on Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, 53-63. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada (URL:<http://quarles.unbc.edu/mcgregor/proceedings>).
- Jones, C. 1977 An introduction to the study of public policy, 2nd. Edition. Wadsworth, Belmont, CA.
- Jordan, G. and Schubert, K. 1992 A preliminary ordering of policy network labels. *European Journal of Political Research* 21: 7-27.
- Kelman, S. 1981a Regulating America, regulating Sweden: A comparative study of occupational safety and health. MIT Press, Cambridge, MA.
- Kelman, S. 1981b What price incentives? Economists and the environment. Auburn House Publishing Company, Boston, MA.
- Kenis, P. and Schneider, V. 1991 Policy networks and policy analysis: Scrutinizing a new analytical toolbox. *In: Marin, B. and Mayntz, R. (eds) Policy networks: Empirical evidence and theoretical considerations*, 25-59. Campus Verlag, Frankfurt, Germany.
- Kennedy, M. 1979 Generalising from single case studies. *Evaluation Quarterly* 12: 661-78.
- Keohane, R. 1993 The analysis of international regimes: Towards a European-American research programme. *In: Rittberger, V. (ed.) Regime theory and international relations*, 379-96. Clarendon Press, Oxford, UK.
- Kiekens, J.-P. 1994 Aménagement forestier durable, enregistrement international des forêts et eco-certification du bois. Report submitted to the European Commission (DG XI-

- Environment), Environmental Strategies Europe, Brussels, Belgium.
- Kimmins, J.P. 1994 Sustainable development in Canadian forestry in the face of changing paradigms. *In: Natural Resources Canada, Timber supply in Canada: Challenges and choices*, 3-18. Natural Resources Canada, Ottawa, Ontario, Canada.
- Kimmins, J.P. 1997 *Balancing act: Environmental issues in forestry*, 2nd edition. Vancouver, British Columbia, Canada.
- King, D. 1996 The political economy of forest sector reform in Indonesia. *Journal of Environment & Development* 5: 216-32.
- Kingdon, J. 1984 *Agendas, alternatives and public policies*. Little Brown, Boston, MA.
- Kirk, J. and Miller, M. 1986 *Reliability and validity in qualitative research. Qualitative research methods, Volume 1*. Sage Publications, Newbury Park, CA, and London, UK.
- Kirschen, E. *et al.* 1964 *Economic policy in our times*. University of Chicago Press, Chicago, IL.
- Kleinwort Benson Research 1996 *Indonesia Plywood – Barito Pacific*. Kleinwort Benson, Hong Kong.
- Knight, A.P. 1996 A report on B&Q's 1995 timber target. *In: Aspinall, R. and Smith, J. (eds) Environmentalist and business partnerships: A sustainable model? A critical assessment of the WWF UK 1995 Group*, 34-44. Cambridge Environmental Initiative Professional Seminar Series, The White Horse Press, Cambridge, UK.
- Knocke, D. 1990 *Political networks: The structural perspective*. Cambridge University Press, Cambridge, UK.
- Knocke, D. and Kuklinski, J.H. 1982 *Network analysis*. Sage Publications, Beverley Hills, CA.
- Knocke, D. and Laumann, E.O. 1982 The social organisation of national policy domains: An exploration of some structural hypotheses. *In: Marsden, V. and Lin, N. (eds) Social structure and network analysis*, 255-70. Sage, Beverley Hills, CA.
- Knoepfel, P. 1995 *Analyse de politiques publiques comparée. Support de cours et dossier de travail no 11*, Institut de Hautes Etudes en Administration Publique, Lausanne, Switzerland.
- Krasner, S.D. 1983 *International regimes*. Cornell University Press, Ithaca, NY.
- Kriesi, H. 1996 The organizational structure of new social movements in a political context. *In: McAdam, D., McCarthy, J.D. and Zald, M.N. (eds) Comparative perspectives on social movements: Political opportunities, mobilizing structures, and cultural framings*, 152-84. Cambridge University Press, Cambridge, UK.
- Kriesi, H.-P. and Wisler, D. 1996 Social movements and direct democracy in Switzerland, *European Journal of Political Research* 30: 19-40.
- Kriesi, H.-P., Koopmans, R., Duyvendak, J.-W. and Guigni, M.C. 1992 New social movements and political opportunities in Western Europe. *European Journal of Political Research* 22: 219-44.
- Kummer, D. and Turner, B. 1994 The human causes of deforestation in Southeast Asia", *BioScience* 44: 323-8.
- Lammerts van Bueren, E.M. and Blom, E. 1997 Hierarchical framework for the formulation of sustainable forest management standards: Principles, criteria and indicators. The Tropenbos Foundation, Leiden, the Netherlands.
- Landau, M. 1977 The proper domain of policy analysis. *American Journal of Political Science* 21: 437-72.
- Lanly, J.-P. and Clément, J. 1979 Present and future forest and plantation areas in the tropics. *Unasylva* 31(123): 12-20.
- Laswell, H. 1956 *The decision process*. University of Maryland Bureau of Governmental Research, College Park, MD.
- Laumann, E.O. and Knocke, D. 1987 *The organizational state: Social choice in national policy domains*. The University of Wisconsin Press, Madison, WI.
- Lawton, S. 1997 *Markets for certified products*. Paper presented at the International Conference on Certification, Criteria and Indicators: Global Approaches to Sustainable

- Forest Management, 21-26 September 1997, Prince George, British Columbia, by the Canadian Institute of Forestry.
- Lee, K., Humphreys, D. and Pugh, M. 1998 'Privatisation' in the United Nations system: Patterns of influence in three intergovernmental organizations. Global Society, New York, NY.
- LEEC (London Environmental Economics Centre) 1993 The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests. Report to the International Tropical Timber Organization (two volumes), LEEC, London, UK.
- LEI working group 1994 Criteria, variables and indicators of sustainable forest management for determining Indonesian ecolabel. *In*: Proceedings of the International Conference on Forest Product Certification Scheme, Puncak, Indonesia, 14-17 September 1994, 6-41. RMI, Bogor, Indonesia.
- LEI working group 1996 Guidelines evaluation process of unit management to obtain certificate of sustainable forest management. LEI, Jakarta, Indonesia.
- LEI working group 1997a Indonesian ecolabelling working group at a glance", LEI, Jakarta, Indonesia.
- LEI working group 1997b Draft proposal: Indonesian national standard, April 1997. LEI, Jakarta, Indonesia.
- Leiner, S. and Elliott, C. 1997 WWF internal report on the Fourth Expert Level Follow-up Meeting of the Helsinki Conference, April 1997. WWF International, Gland, Switzerland.
- Lertzman, K., Rayner, J. and Wilson, J. 1996 Learning and change in the British Columbia forest policy sector: A consideration of Sabatier's Advocacy Coalition Framework. *Canadian Journal of Political Science* XXIX: 111-33.
- Levy, M. 1994 The policies and politics of forestry in Ontario. Masters Thesis in Environmental Studies, York University, North York, Ontario, Canada.
- Lillandt, M. 1997 Certification for sustainable family forestry as a marketing tool in Europe. Paper presented at the Conference on Future Forest Policies in Europe – Balancing Economic and Ecological Demands, 15-18 June. European Forest Institute, Joensuu, Finland.
- Linder, P. and Östlund, L. 1998 Structural changes in three mid-boreal Swedish forest landscapes, 1885-1996. Unpublished manuscript (submitted to Biological Conservation), Department of Forest Vegetation Ecology, Swedish University of Agricultural Sciences, Umea, Sweden.
- Linder, S.H. and Peters, B.G. 1989 Instruments of government: perceptions and contexts. *Journal of Public Policy* 9: 35-58.
- LL (Land Lantbruk) 1995 Mjölömärke för skogen i maj, 24 February 1995. Sweden.
- LL 1998 FSC inte bara för bolagen, 7 August 1998.
- Loiskekosi, M., Granholm, H., Starr, M., Halko, L. and Oinonen, U. (eds) 1995 Interim report on the Follow-up of the Second Ministerial Conference. Ministerial Conference on the Protection of Forests in Europe, Ministry of Agriculture and Forestry, Helsinki, Finland.
- Lowe, J.J., Power, K. and Gray, S.L. 1997 Canada's forest inventory 1991. Canadian Forest Service Report PI/X/115F, Ottawa, Ontario, Canada.
- Lowe, P. and Goyder, J. 1983 Environmental groups in politics. George Allen and Unwin, London, UK.
- Lowi, T.J. 1972 Four systems of policy, politics and choice. *Public Administration Review* 32: 298-310.
- M'Gonigle, R.M. 1997 Reinventing British Columbia: Towards a new political economy in the forest. *In*: Barnes, T.J. and Hayter, R. Troubles in the rainforest: British Columbia's economy in transition, 37-52. Western Geographical Press, Victoria, BC, Canada.
- MacKay, D. 1985 Heritage lost: The crisis in Canada's forests", MacMillan Press, Toronto, Ontario, Canada.
- MacWilliams Cosgrove Smith Robinson Ltd 1997 Beautiful British Columbia: A qualitative research report. Report prepared for BC Wild, Vancouver, BC, Canada.

- Maitland, M.C. 1995 The argument for not going it alone. *Timber Trades Journal*, 25 November, p 18.
- Manicas, P.T. 1985 Explanation and quantification. *In*: Glassner, B. and Moreno, J. (eds) *The Qualitative-quantitative distinction in social sciences*, 179-205. Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Manurung, T. and Buongiorno, J. 1997 Effects of the ban on tropical log exports on the forestry sector of Indonesia. *Journal of World Forest Resource Management* 8: 21-49.
- March, J.G. and Olsen, J.P. 1976 *Ambiguities and choice in organizations*. Universitetsforlaget, Berlin, Germany.
- Marshall, C. and Rossman, G. 1989 *Designing qualitative research*", Sage Publications, Newbury Park, CA, and London, UK.
- Mather, A.S. 1990 *Global forest resources*. Belhaven Press, London, UK.
- Mawhinney, H.B. 1993 An advocacy coalition approach to change in Canadian Education. *In*: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) *Policy change and learning: An advocacy coalition approach*, 59-82. Westview Press, Boulder, CO, and San Francisco, CA.
- May, E. 1998 *At the cutting edge: The crisis in Canada's forests*. Key Porter Books, Toronto, Ontario, Canada.
- May, P.J. 1986 Politics and policy analysis. *Political Science Quarterly* 101: 109-25.
- Mazey, S. and Richardson, J. 1996 The logic of organization: Interest groups. *In*: Richardson, J. (ed.) *European Union: Power and policy-making*, 200-15. Routledge, London, UK.
- MB (MacMillan Bloedel Limited) 1998a The Forest Project, June 1998. <http://www.mbltd.com>.
- MB 1998b Proposal for stumpage and tenure reform in BC, June 1998. <http://www.mbltd.com>.
- McCloskey, K. 1997 Is forest certification marketable? *In*: *Proceedings of the International Conference on Global Approaches to Sustainable Forest Management*, 21-26 September 1997, Prince George, British Columbia, 146. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada. (URL:<http://quarles.unbc.edu/mcgregor/proceedings>).
- McKee, C. 1996 *Treaty talks in British Columbia*. UBC Press, Vancouver, BC, Canada.
- McLeod, R. 1997 Survey of recent developments. *Bulletin of Indonesian Economic Studies* 33(1): 3-44.
- McNaught, K. 1988 *The Penguin history of Canada*. Penguin Books, London, UK.
- McNulty, J.W. and Cashwell, J.H. 1995 The land manager's perspective on certification. *Journal of Forestry* 93(4): 22-5.
- MCPFE (Ministerial Conference on the Protection of Forests In Europe) 1996 Progress report. Liaison Unit, Ministry of Agriculture, Rural Development and Fisheries, Lisbon, Portugal.
- MCPFE 1997 Proposal for the pan-European Forest Management Unit Level (FMUL) guidelines for sustainable forest management, second draft 29 April 1997. Liaison Unit, Ministry of Agriculture, Rural Development and Fisheries, Lisbon, Portugal.
- MEE (Ministry of Environment and Energy) 1996 Protect sustainable forest: Proposed Danish field level guidelines for sustainable forest management. The National Forest and Nature Agency, Copenhagen, Denmark.
- Mercier, J. 1996 Le système d'aménagement forestier durable de l'Association Canadienne de Normalisation. *Policy Options* 17(9): 21-4.
- Michaelowa, A. 1996 Trade and labelling of timber and timber products. Institut für Wirtschaftsforschung, Hamburg, Germany.
- Mikkelsen, B. 1995 *Methods of development work and research: A guide for practitioners*. Sage Publications, New Delhi, India, and London, UK.
- Miles, M. and Huberman, M. 1994 *Qualitative data analysis: An expanded source book*", Sage Publications, Thousand Oaks, CA, and London, UK.
- Miljörapporten 1995a SNF aktion retar galla pa skogspartners. Sweden.
- Miljörapporten 1995b Kritisk läge för miljömärking av skog, 10 January. Sweden.
- Milne, W.J. 1996 *The McKenna miracle: Myth or reality*. Monograph series on public policy

- and public administration, University of Toronto, Ontario, Canada.
- Min, W. 1995 Timber certification in Malaysia – Current perceptions. WWF Malaysia Discussion Paper, Kuala Lumpur, Malaysia.
- Modig, A. 1997 Nordic forestry: Public opinion in Holland, Germany and Great Britain. Demoskop AB, Stockholm, Sweden.
- MoDo 1995 Environmental report 1995. MoDo, Stockholm, Sweden.
- MOF (Ministry of Forestry) 1993 Ministerial Decree number 252/Kpts-II/93, “Criteria and Indicators for the Sustainable Management of the Natural Production Forest. Ministry of Forestry, Jakarta, Indonesia.
- MOF 1995a Country brief: Indonesia Forestry Action Programme. MOF, Jakarta, Indonesia.
- MOF 1995b Forestry statistics of Indonesia 1993/1994. Secretariat General of the Ministry of Forestry, Jakarta, Indonesia.
- MOF 1996 Progress towards sustainable management of tropical forests (Objective year 2000). Annual Review 1995-1996 prepared by the Ministry of Forestry, Republic of Indonesia for the 21st session of the International Tropical Timber Council. MOF, Jakarta, Indonesia.
- Moore, K. 1997 Auditing forest practices in BC – Audits undertaken and lessons learned by the Forest Practices Board. *In: Proceedings of the International Conference on Global Approaches to Sustainable Forest Management*, 21-26 September 1997, Prince George, British Columbia, 173-80. Canadian Institute of Forestry and McGregor Model Forest Association, Prince George, BC, Canada. (URL:<http://quarles.unbc.edu/mcgregor/proceedings>)
- Morgan Stanley 1998a Hidden value in large Swedish forest assets. UK and Europe Investment Research Report, 5 March 1998. Morgan Stanley, Dean Witter Discover and Co., London, UK.
- Morgan Stanley 1998b Paper and packaging: Europe. Fundamentals deteriorate: reducing estimates and ratings, 20 August 1998. Morgan Stanley, Dean Witter Discover and Co., London, UK.
- Munro, J.F. 1993 California water politics: Explaining policy change in a cognitively polarized subsystem. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 105-28. Westview Press, Boulder, CO, and San Francisco, CA.
- Murphy, D.F. 1996 Business, NGOs and sustainable development: Towards a global perspective. *In: Aspinall, R. and Smith, J. (eds) Environmentalist and business partnerships: A sustainable model? A critical assessment of the WWF-UK 1995 Group*, 45-72. Cambridge Environmental Initiative Professional Seminar Series, The White Horse Press, Cambridge, UK.
- Myers, N. 1980 Conservation of tropical moist forests. National Academy of Sciences, Washington, DC.
- Myers, N. 1984 The primary source: Tropical forests and our future. W.W. Norton and Company, New York, NY.
- Nakamura, R.T. 1987 The textbook policy process and implementation research. *Policy Studies Review* 7: 142-54.
- NBF (National Board of Forestry–Skogsstyrelsen) 1994 Sweden’s new Forest Policy. National Board of Forestry, Jönköping, Sweden.
- NBF 1996 Nature protection and nature conservation in forests. National Board of Forestry and Swedish Environmental Protection Agency, Jönköping, Sweden.
- NBF/FAO 1998 Swedish forest policy in an international perspective. National Board of Forestry, Jönköping, Sweden.
- Nectoux, F. 1985 Timber! An investigation of the UK tropical timber industry. Friends of the Earth, London, UK.
- Nectoux, F. and Dudley, N. 1987 A hard wood story: Europe’s involvement in the tropical timber trade. Friends of the Earth and Earth Resources Research, London, UK.
- NFC (Nordic Forest Certification) 1996 Nordic forest certification, Report No. 1. Nordic Forest Certification, Stockholm, Sweden.
- NFSC (National Forest Strategy Coalition) 1997 National Forest Strategy. ‘Sustainable forests: A Canadian commitment’. Final evaluation report. NFSC, Hull, Quebec, Canada.

- Norralk, M. 1998 Impact of the membership in the EU on nature conservation – The Swedish case. *In*: Glück, P., Kupka, I. and Tikkanen, I. (eds) *Forest policies in the countries with economies in transition – Ready for the European Union?*, 35-44. European Forest Institute Proceedings No. 21, EFI, Joensuu, Finland.
- NRMP (Natural Resources Management Project) 1995 A study of the natural resource impacts of export marketing boards in Indonesia. NRMP report number 55, Jakarta, Indonesia.
- Nugroho, T. 1995 An illustration of implementation of sustainable forest management and forest product certification from Indonesia. Paper presented at FAO/ITTO Regional Expert Consultation on the Implementation of Sustainable Forest Management, 12-15 December, Bangkok, Thailand.
- Och, M. and Ottosson, A. 1998 *Mojlömärkt Skogsbruk-Sa Här Ser Det Ut*, January 1998, 12-14. Sveriges Natur, Swedish Society for Nature Conservation, Stockholm, Sweden.
- OECD (Organization for Economic Co-operation and Development) 1989 *Renewable natural resources: Economic incentives for improved management*. OECD, Paris, France.
- OECD (Organisation for Economic Co-operation and Development) 1991a *Environmental labelling in OECD countries*. OECD, Paris, France.
- OECD 1991b *Environmental policy: How to apply economic instruments*. OECD, Paris, France.
- OECD 1992 *Market and government failures in environmental management: Wetlands and forests*. OECD, Paris, France.
- OECD 1996 *Saving biological diversity: Economic incentives*. OECD, Paris, France.
- Olssen, A. and Olssen, R. 1973 *Skogsbruk och Ekologi. Fältbiologerna*, Stockholm, Sweden.
- Ostrom, E. 1990 *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press, Cambridge, UK.
- Osgood, D. 1994 *Government failure and deforestation in Indonesia*. *In*: Brown, K. and Pearce, D. (eds) *The causes of tropical deforestation: The economic and statistical analysis of factors giving rise to the loss of tropical forests*, 217-25. UCL Press, London, UK.
- Östlund, L., Zackrisson, O. and Axelsson, A.-L. 1997 *The history and transformation of a Scandinavian boreal landscape since the 19th century*. *Canadian Journal of Forestry Research* 27: 1198-206.
- Palmer, J.R., Curtin, D. and Graham, C. 1996 *Monitoring forest practices*. *In*: *Proceedings of the UBC-UPM Conference on the Ecological, Social and Political Issues of the Certification of Forest Management*, 91-117. Faculty of Forestry, UBC, Vancouver, BC, Canada.
- Panayotou, T. 1994 *Economic instruments for environmental management and sustainable development*. *Environmental Economics Papers* number 16, United Nations Environment Programme, Nairobi, Kenya.
- Pattie, D. 1994 *Environmentally-based marketing programs: A strategic approach to enhancing marketing performance*. Unpublished paper, College of Forestry and Natural Resources, University of Colorado, Boulder, CO.
- Patton, M. 1990 *Qualitative evaluation methods*. Sage Publications, Newbury Park, CA, and London, UK.
- Peluso, N. 1992 *Rich forests, poor people: Resource control and resistance in Java*. University of California Press, Berkeley, CA.
- Perum Perhutani 1994 *A glance at Perum Perhutani (Forest State Corporation), Indonesia*. Perum Perhutani, Jakarta, Indonesia.
- Peters, B. 1989 *The politics of bureaucracy*. Longman Publishers, New York, NY, and London, UK.
- Petersson, O. 1994 *Swedish government and politics*. Fritzes, Stockholm, Sweden.
- Phidd, R.W. and Doern, G.B. 1978 *The politics and management of Canadian economic policy*. MacMillan, Toronto, Ontario, Canada.
- Poore, D. 1995 *Forestry and nature conservation: Changing perspectives*. *Commonwealth Forestry Review* 74: 5-19.
- Poore, D., Burgess, P., Palmer, J., Rietbergen, S. and Synnott, T. 1989 *No timber without trees:*

- Sustainability in the tropical forest. Earthscan Publications Ltd., London, UK.
- Potter, L. 1991 Environmental and social aspects of timber exploitation in Kalimantan, 1967-1989. *In*: Hardjono, J. (ed.) Indonesia: Resources, ecology, and environment, 177-211. Oxford University Press, Oxford, UK, and New York, NY.
- PPI (Pulp and Paper International) 1977 PPI Top 100. September 1997, Brussels, Belgium.
- PPI 1982 PPI Top 100. September 1982, Brussels, Belgium.
- PPI 1992 PPI Top 150 Listing. September 1992, Brussels, Belgium.
- PPI 1997 PPI Top 150. September 1997, Brussels, Belgium.
- Prabhu, R., Colfer, C.J.P. and Dudley, R.G. 1997 Guidelines for developing, testing & selecting criteria and indicators for sustainable forest management (Draft). CIFOR, Bogor, Indonesia.
- Prabhu, R., Colfer, C.J.P., Venkateswarlu, P., Tan, L.C., Soekmadi, R. and Wollenberg, E. 1996 Testing criteria and indicators for the sustainable management of forests: Phase 1, Final Report. CIFOR, Bogor, Indonesia.
- Pradère, A. 1989 French furniture makers. Sotheby's Publications, Philip Wilson Publishers, London, UK.
- Prasetyohadi, P. 1996 Emmy Hafild feels at home in WALHI. Jakarta Post, Sunday, 21 July, 12.
- Pratt, L. and Urquhart, I. 1994 The last great forest: Japanese multinationals and Alberta's northern forests. NeWest Press, Edmonton, Alberta, Canada.
- Pressmann, J. and Wildavsky, A. 1973 Implementation. University of California Press, Berkeley, CA.
- Price Waterhouse 1995 Forest Alliance of British Columbia: Analysis of recent British Columbia forest policy and land use initiatives. Price Waterhouse, Vancouver, BC, Canada.
- Putnam, R. 1988 Diplomacy and domestic politics: The logic of two-level games. *International Organization* 42: 420-41.
- Rae, M. 1995 WWF trip report: Meeting of the informal international study group 'Sustainable Forestry', 13 November 1995, WWF Australia, Melbourne, Victoria, Australia.
- Rametsteiner, E. 1994 Timber labelling – A quality mark for timber and timber products – options to be considered. Federal Ministry of Environment, Youth and Family, Vienna, Austria.
- Rametsteiner, E., Schwarzbauer, P., Juslin, H., Kärnä, J., Cooper, R., Samuel, J., Becker, M. and Kühn, T. 1998 Potential markets for certified forest products in Europe. Discussion Paper 2, European Forest Institute; Joensuu, Finland.
- Raustiala, K. 1994 Functional differentiation in international policy regimes. Paper presented at the 1994 American Political Science Association Convention, 1-4 September 1994, New York, NY.
- Reichert, C.S. and Cook, T.D. 1979 Beyond qualitative vs. quantitative methods. *In*: Cook, T.D. and Reichert, C.S. (eds) Qualitative and quantitative methods in evaluation research, 7-32. Sage Publications, Beverley Hills, CA.
- Repetto, R. 1988 The forest for the trees: Government policies and the misuse of forest resources. World Resources Institute, Washington, DC.
- Repetto, R. and Gillis, M. 1988 Public policies and the misuse of forest resources. Cambridge University Press, Cambridge, MA, and New York, NY.
- Richardson, J.J. 1996 Policy-making in the EU: Interests, ideas and garbage cans of primeval soup. Richardson, J.J. (ed.) "European Union: power and policy-making, 3-23. Routledge, London, UK, and New York, NY.
- Richardson, S. 1990 Forest institutions and policy. UTF/INS/065/INS: Forestry Studies Field Document Number VI-5, GOI/FAO, Ministry of Forestry, Jakarta, Indonesia.
- RMI (Indonesian Institute for Forestry and Environmental Research and Service) 1994 Forest product certification system: A case study of the Indonesian scheme. Proceedings of the International Conference on Forest Product Certification Scheme, Puncak, Indonesia, 14-17 September 1994. RMI, Bogor, Indonesia.

- Rose, C. 1998 *The turning of the spar*. Greenpeace Publications, London, UK.
- Rosenberg, P. 1993 *Results from the Swedish Forest Stewardship Council consultation*. WWF-Sweden, Stockholm, Sweden.
- Ross, M.M. 1995 *Forest management in Canada*. Canadian Institute of Resources Law, University of Calgary, Alberta, Canada.
- Rotherham, T. 1997 *Chain of custody*. Paper presented at the International Conference on Certification, Criteria and Indicators: Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, by the Canadian Institute of Forestry.
- Rotherham, T., Murphy, P., Oldham, H. and Whidden, A. 1993 *Better information needed our forests*. *The Forestry Chronicle* 69: 470.
- Ryan, K. 1997 *New Brunswick woodlots*. Transcript of Canadian Broadcasting Corporation Radio News, 7 January 1997. CBC, Ontario, Canada.
- Saaty, T.L. 1995 *Decision making for leaders: the analytic hierarchy process for decisions in a complex world*. RWS Publications, Pittsburgh, PA.
- Sabatier, P.A. 1986 *Top-down and bottom-up models of policy implementation: A critical analysis and suggested synthesis*. *Journal of Public Policy* 6: 21-48.
- Sabatier, P.A. 1988 *An Advocacy Coalition Framework of policy change and the role of policy-oriented learning therein*. *Policy Sciences* 21: 129-68.
- Sabatier P.A. 1993 *Policy change over a decade or more*. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 13-40. Westview Press, Boulder, CO, and San Francisco, CA.
- Sabatier P.A. and Jenkins-Smith, H.C. 1993 *The Advocacy Coalition Framework: Assessment, revisions, and implications for scholars and practitioners*. *In: Sabatier, P.A. and Jenkins-Smith, H.C. (eds) Policy change and learning: An advocacy coalition approach*, 211-36. Westview Press, Boulder, CO, and San Francisco, CA.
- Salamon, L. M. 1981 *Rethinking public management*. *Public Policy* 29: 21-48.
- Salamon, L.M. 1989 *The changing tools of government action: An overview*. *In: Salamon, L.M. (ed.) Beyond privatization: The tools of government action*, 3-22. The Urban Institute Press, Washington, DC.
- Salamon, L.M. and M. S. Lund (1989) *The tools approach: Basic analytics*. *In: Salamon, L.M. (ed.) Beyond privatization: The tools of government action*, 23-49. The Urban Institute Press, Washington, DC.
- Salim, E. 1994 *Indonesian forest product certification scheme*. *In: Proceedings of the International Conference on Forest Product Certification Scheme, Puncak, Indonesia*, 14-17 September 1994, 205-12. RMI, Bogor, Indonesia.
- Salim, E., Djanlins, U. and Suntana, A. 1997 *Forest product trade and certification: An Indonesian scheme*. Paper presented at the XI World Forestry Congress, Antalya, Turkey, October 1997. LEI, Jakarta, Indonesia.
- Sample, V.A., Johnson, N., Aplet, G.H. and Olsen, J.T. 1993 *Introduction: Defining sustainable management*. *In: Aplet, G.H., Johnson, N., Olsen, J.T. and Sample, V.A. (eds) Defining sustainable forestry*, 3-10. Island Press, Washington, DC.
- Sandberg, L.A. 1992 *Introduction*. *In: Sandberg, L.A. (ed.) Trouble in the woods: Forest policy and social conflict in Nova Scotia and New Brunswick*, 1-21. Acadiensis Press, Fredericton, New Brunswick, Canada.
- Sanders, P. 1994 *The role of private woodlot owners in sustainable development: A view from British Columbia*. *In: Canadian Forest Service, Timber supply in Canada: Challenges and choices*, 133-41. CFS, Hull, Quebec, Canada.
- SAS (Swiss American Securities—Credit Suisse) 1996 *Paper and forest products industry – Investment commentary*. SAS, New York, NY.
- SCA (Svenska Cellulosa Aktiebolaget) 1987 *Forestry and nature conservation: A policy statement*. SCA Skog AB, Sundsvall, Sweden.
- SCA 1996 *SCA Skog and Biodiversity*. SCA Skog AB, Sundsvall, Sweden.

- SCC (Standards Council of Canada) 1995 New work item proposal: Guide to the application of ISO 14001 in the forestry sector for sustainable forest management. ISO/TC207/N76, SCC, Ottawa, Ontario, Canada.
- SCC 1997 Update summary on ISO/TC 207 program and document development. ISO/TC 207 N191, 1997, SCC, Ottawa, Ontario, Canada.
- Schattschneider, E.E. 1960 The semi-sovereign people. A realist's view of democracy in America. Holt Publishers, New York, NY.
- Schlaepfer, R. 1997 Ecosystem-based management of natural resources: A step towards sustainable development. Occasional Paper number 6, International Union of Forestry Research Organizations (IUFRO), Vienna, Austria.
- Schmidheiny, S. 1992 Changing course: A global business perspective on development and the environment. MIT Press, Cambridge, MA.
- Schmutzenhofer, H. 1992 IUFRO's birthday. IUFRO News 21: 3.
- Schneider, A. and Ingram, H. 1990 Behavioural assumptions of policy tools. *Journal of Politics* 52: 510-29.
- Schwartz, A. 1994 A nation in waiting: Indonesia in the 1990s. Allen and Unwin, St Leonards, NSW, Australia
- SCS (Scientific Certification Systems) 1995 The forest certification program: Program description and operations manual. SCS, Oakland, CA.
- SEPA (Swedish Environmental Protection Agency) 1994 Biological diversity in Sweden – A country study. SEPA, Solna, Sweden.
- SFIA (Swedish Forest Industries Association) 1995 Valuable contribution to forestry certification. Press release, 23 May 1995, Stockholm, Sweden.
- SFIA 1996a The Swedish forest industry: Facts and figures 1996. SFIA, Stockholm, Sweden.
- SFIA 1996b The forest industries and forestry in Sweden, 1996. SFIA, Stockholm, Sweden.
- SGS (Société Générale de Surveillance) 1994 SGS-Silviconsult-PT. Wahanabhakti Persadajaya assessment of Djajanti Group-Executive Summary. SGS, Jakarta, Indonesia.
- SGS-Silviconsult 1993 Ecolabelling as an incentive for sustainable forest management (Feasibility Study for Pilot Project) Indonesia. SGS-Silviconsult, Oxford, UK.
- Shirley, K. 1997 Seeing the wood for the trees. TC 207/WG2, Forest management: how and why. The ISO 14001 Environment, March 1997, 12-14. ISO, Geneva, Switzerland.
- SI (Swedish Institute) 1996a Forestry and the forest industry. Fact sheets on Sweden (FS 25 y Qf). The Swedish Institute, Stockholm, Sweden.
- SI 1996b Local government in Sweden. Fact sheets on Sweden (FS 52 s Od). The Swedish Institute, Stockholm, Sweden.
- SI 1996c Labour relations in Sweden. Fact sheets on Sweden (FS 3 u Oha). The Swedish Institute, Stockholm, Sweden.
- SI 1997a The Sami people in Sweden. Fact sheets on Sweden (FS 59 o Mcs). The Swedish Institute, Stockholm, Sweden.
- SI 1997b The Swedish economy. Fact sheets on Sweden (FS 1 y Qad). The Swedish Institute, Stockholm, Sweden.
- SI 1997c Agenda 21 in Sweden's municipalities. Current Sweden, Number 416. The Swedish Institute, Stockholm, Sweden.
- Sigurdson, R. 1996 The British Columbia New Democratic Party: Does it make a difference? *In*: Carty, R.K. (ed.) *Politics, policy and government in British Columbia*, 310-38. UBC Press, Vancouver, BC, Canada.
- Sikkink, K. 1992 Human rights, principled issue – Networks, and sovereignty in Latin America. *International Organization* 46: 411-41.
- Sikod, F. 1996 Certification processes in sustainable forest management: Economic concepts and indicators. *In*: Proceedings of the UBC-UPM Conference on the Ecological, Social and Political Issues of the Certification of Forest Management, 125-46. Faculty of Forestry, UBC, Vancouver, BC, Canada.
- Silva Belgica 1994 Editorial, No. 6, November/December 1994.
- Simula, A.-L. 1997 Internationally credible certification system for sustainable forest management in Finland. Paper presented at the International Conference on Certification,

- Criteria and Indicators: Global Approaches to Sustainable Forest Management, 21-26 September 1997, Prince George, British Columbia, by the Canadian Institute of Forestry.
- Simula, M. 1996 International and institutional arrangements for certification of forest management and eco-labelling of forest products. *In: Proceedings of the UBC-UPM Conference on the Ecological, Social and Political Issues of the Certification of Forest Management*, 170-93. Faculty of Forestry, UBC, Vancouver, BC, Canada.
- Simula, M. 1998a Authentication of forest management quality. Paper presented at the Symposium de la Gestion Durable des Forêts en France et en Europe, Versailles, 14-15 May 1998.
- Simula, M. 1998b Testing of the Finnish certification standard. Indufor, Helsinki, Finland.
- Sinaga, K. 1996 NGO's frustration goes public. *Jakarta Post*, 19 July, p 1.
- SKEPHI (Indonesian Network on Tropical forest Conservation) 1990 Selling our common heritage: Commercialization of Indonesian forests", SKEPHI, Jakarta, Indonesia.
- Skocpol, T. 1979 States and social revolution. Cambridge University Press, Cambridge, UK.
- Skogen 1997 Ibland Kan Skogsgubbar Vara Våldigt Barnsliga, p 10-11, 12/1997, Sweden.
- Skogsindustrierna 1994 A search for sustainable forestry – The Swedish view. Annual Publication 1993. Swedish Pulp and Paper Association, Stockholm, Sweden.
- Skole, D. and Tucker, C. 1993 Tropical deforestation and habitat fragmentation in the Amazon: Satellite data from 1978 to 1988. *Science* 260: 1905-10.
- SmartWood 1998 First Canadian forest company to earn environmental endorsement. Press release, 25 February 1998. SmartWood, VT.
- Södra 1997a Södra: A brief summary. Södra, Växjö, Sweden.
- Södra 1997b We are well on the way: Södra towards a better respect for nature. Södra, Växjö, Sweden.
- Södra 1998 Södra's forestry standard for certification of family forestry. Södra, Växjö, Sweden.
- Soemito, A. 1994 Cultivation of tropical trees and labelling (interview). *Conservation Indonesia* 10(2): 17-18. WWF Indonesia Programme, Jakarta, Indonesia.
- Soemito, A. 1995 Industrial pressures for over exploitation of Indonesia's forests. *In: Sandbukt, O. (ed.) Management of tropical forests: Towards an integrated perspective*, 183-8. Centre for Development and the Environment, University of Oslo, Norway.
- Soemito, A. 1996 Assessment of forest concessions in Indonesia for the review of their preparedness toward Year 2000. APhi paper presented at the Indonesian/German conference on Trade, Labelling and Forest Products and Certification of Sustainable Forest Management, Bonn, 12-16 August 1996.
- Sommer, A. 1976 An attempt at an assessment of the world's tropical forests. *Unasylva* 28(112-13): 5-25.
- SOS (Sveriges Officiella Statistik) 1997 Skogsstatistisk Arsbook 1997. Skogsstyrelsen, Jönköping, Sweden.
- SPPA (Swedish Pulp and Paper Association) 1992 This is how biodiversity will be preserved. Press briefing, 20 October 1992.
- SPPA 1993 Common goal for conservationists and forestry sector: 'Seal of approval' sought for good forestry practice in Sweden. Press briefing, 29 December 1993.
- SSNC (Swedish Society for Nature Conservation) 1996 The Swedish Society for Nature Conservation – Opening up new frontiers. SSNC, Stockholm, Sweden.
- SSNC 1997 New environmental criteria for paper. Press release, 15 January 1997.
- SSNC/WWF (World Wide Fund For Nature Sweden) 1995 Preliminary criteria for environmental certification of Swedish forestry. SSNC/WWF, Stockholm, Sweden.
- Stanbury, W.T., Vertinsky, I.B. and Wilson, B. 1994 The challenge to Canadian forest products in Europe: Managing a complex

- environmental issue. Report prepared by the Forest Economics and Policy Analysis Research Unit, University of British Columbia, Vancouver, BC, Canada.
- Stora 1997 Annual Report 1996. Stora Forest and Timber, Falun, Sweden.
- Suharyanto, H. 1993 Foresters fall short of targets. *Indonesian Business Weekly*, 16 July 1993, Jakarta, Indonesia.
- Sunderlin, W. and Resosudarmo, I. 1996 Rates and causes of deforestation in Indonesia: Towards a resolution of the ambiguities. CIFOR Occasional paper no. 9, CIFOR, Bogor, Indonesia.
- Suntana, A. 1996 Certification of government-owned forests, community-owned forests and privately-owned forests. Paper presented at the International Conference on Certification and Labelling of Products from Sustainably Managed Forests, Brisbane, 26-30 May 1996.
- SWG (Swedish FSC Working Group) 1996 Information: Development of national standards for forest certification, 24 September 1997. SWG, Stockholm, Sweden.
- SWG 1997a Accompanying letter to the proposed Swedish Standard for Forest Certification, 24 September 1997. SWG, Stockholm, Sweden.
- SWG 1997b Proposed Swedish FSC Standard for Forest Certification, 24 September, 1997. SWG, Stockholm, Sweden.
- SWG 1997c Appendices to proposed Swedish FSC Standard for Forest Certification, 24 September 1997. SWG, Stockholm, Sweden.
- TAG (Transmigration Advisory Group) 1991 Forest clearance study. Ministry of Transmigration, Jakarta, Indonesia.
- Tarasofsky, R.G. 1995 The international forests regime: Legal and policy issues. *Issues in Forest Conservation*, WWF/IUCN–World Conservation Union, Gland, Switzerland.
- The Economist 1997 Indonesia survey, 26 July 1997, London, UK.
- The Independent 1996 5, May 1996, p 5, London, UK.
- The Montreal Process 1995 Criteria and indicators for the conservation and sustainable management of temperate and boreal forests. Coordination Office, Canadian Forest Service, Ottawa, Ontario, Canada.
- The Montreal Process 1997a Progress report, February 1997. Coordination Office, Canadian Forest Service, Ottawa, Ontario, Canada.
- The Montreal Process 1997b Seoul aide-memoirs, August 1997. Coordination Office, Canadian Forest Service, Ottawa, Ontario, Canada.
- The Telegraph Journal 1995 McKenna's environmental agenda. 12 September 1995, Fredericton, New Brunswick, Canada.
- The World Bank 1991 A World Bank policy paper: The forest sector. The World Bank, Washington, DC.
- Tikkanen, I. and Solberg, B. 1995 Evolution of forest policy science in Finland and Norway. *In: Solberg, B. and Pelli, P. (eds) Forest policy analysis – Methodological and empirical aspects*, 69-90. European Forest Institute, Joensuu, Finland.
- Truman, D. 1951 The governmental process. Alfred Knopf, New York, NY.
- TTJ (Timber Trades Journal) 1995 Alternative medicine, 3 June, pp 28-9.
- TTJ 1996 UK's own forestry standards are sufficient, says minister, 27 April, p 5.
- TTJ 1997 Masons score historic first with FSC timber, 8 November, p 5.
- UBC/UPM (University of British Columbia/ Agricultural University of Malaysia) 1996 Proceedings of the UBC-UPM Conference on the Ecological, Social and Political Issues of the Certification of Forest Management", Faculty of Forestry, UBC, Vancouver, Canada.
- Ullsten, O. 1990 The Tropical Forestry Action Plan: Report of the independent review. FAO, Kuala Lumpur, Malaysia.
- UNCED (United Nations Conference on Environment and Development) 1992a Forest principles. Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests. United Nations, New York, NY.
- UNCED 1992b Combatting deforestation, Chapter 11 of Agenda 21: Programme of action for sustainable development. United Nations, New York, NY.

- UNCED 1992c The Rio declaration on environment and development. United Nations New York, NY.
- UNCED 1992d Chapter 8 of Agenda 21: Programme of action for sustainable development. United Nations, New York, NY.
- UNCTAD (United Nations Conference on Trade and Development) 1984 International Tropical Timber Agreement, 1983. TD/TIMBER/11/Rev.1, United Nations, New York, NY.
- UNCTAD 1994 International Tropical Timber Agreement, 1994. TD/TIMBER.2/L.9, United Nations, New York, NY.
- UNCTAD 1995 Report on the Workshop on Eco- Labelling and International Trade, Geneva 28-29 June 1994, TD/B/WG.6, UNCTAD, Geneva, Switzerland.
- UNECE (United Nations Economic and Social Council) Markets for certified forest products: Note by the Secretariat. Timber Committee, TIM/1997/2, UNECE, Geneva, Switzerland.
- UNESCO (United Nations Economic and Social Council) 1996a Trade and environment relating to forest products and services. Report of the Secretary General, Programme Element IV, Ad hoc Intergovernmental Panel on Forests, Commission on Sustainable Development, Report E/CN.17/IPF/1996/11. United Nations, Geneva, Switzerland.
- UNESCO 1996b Scientific research, forest assessment and the development of criteria and indicators for sustainable forest management. Report of the Secretary General, Programme Element III.2, Ad hoc Intergovernmental Panel on Forests, Commission on Sustainable Development, Report E/CN.17/IPF/1996/10. United Nations, Geneva, Switzerland.
- UNESCO 1997a Report of the Fourth Session of the IPF. Ad hoc Intergovernmental Panel on Forests, Commission on Sustainable Development, Report E/CN.17/1997/12. United Nations, New York, NY.
- UNESCO 1997b Report of the open-ended Ad-Hoc International Forum on Forests at its first session. Report E/CN.17/IPF/1997/3. United Nations, New York, NY.
- UNGAS (United Nations General Assembly) 1997 Report of the Special Session of the General Assembly, 27 June 1997. United Nations, New York, NY.
- UNDP (United Nations Development Programme) 1993 Human development report 1993. UNDP, New York, NY.
- Upton, C. and Bass, S. 1995 The forest certification handbook. Earthscan Publications Ltd., London, UK.
- Uruguay Round 1994 Final Act. General Agreement on Tariffs and Trade, Marrakesh, Morocco.
- Vähänen, T and Granholm H. (eds) 1996 Summary report: Intergovernmental Seminar on Criteria and Indicators for Sustainable Forest Management, August 1996, Helsinki. Ministry of Agriculture and Forestry, Helsinki, Finland.
- van Waarden, F. 1992 Dimensions and types of policy networks. *European Journal of Political Research* 21: 29-52.
- Varadarajan, P.R. and Menon, A. 1988 Cause-related marketing: A coalition of marketing strategy and corporate philanthropy. *Journal of Marketing* 52: 58-74.
- Vaughan, S. 1996 Trade and labelling. World Trade Organization, Geneva, Switzerland.
- Viana, V., Ervin, J., Donovan, R.Z., Elliott, C. and Gholz, H. 1996 Certification of forest products: Issues and opportunities. Island Press, Washington DC.
- von Mirbach, M. 1997 Demanding good wood. *Alternatives Journal* 23(3): 10-17.
- Wadsworth, J. and Boateng, P. 1996 Study on markets and market segments for certified timber and timber products. Report for the International Tropical Timber Organization, Yokohama, Japan.
- WALHI (Indonesian Forum for the Environment) 1991 Sustainability and economic rent in the Indonesia forestry sector. WALHI, Jakarta, Indonesia.
- Wallace, A. 1860 On the zoological geography of the Malay archipelago. *Journal of the Linnaean Society* 4: 172-84.

- Watson, F.J.B. 1956 Wallace collection catalogues: Furniture. William Clowes and Sons Ltd., London, UK.
- WCED (World Commission on Environment and Development) 1987 *Our Common Future*. Oxford University Press, Oxford, UK.
- Weber, M. 1947 *The theory of social and economic organization*. Free Press, New York, NY.
- Weiss, C.H. 1977 Research for policy's sake: The enlightenment function of social research. *Policy Analysis* 3: 531-45.
- Weiss, C.H. 1982 Policy research in the context of diffuse decision-making. *Policy Studies Review* 6: 181-203.
- Wellstead, A. 1996 The role of the Advocacy Coalition Framework in understanding forest policy changes: Alberta and Ontario. Masters Thesis, Department of Forestry, University of Toronto, Ontario, Canada.
- Whitmore, T. 1985 *Tropical rain forests of the Far East*, 2nd.edition. Clarendon Press, Oxford, UK.
- Widinugraheni, P. 1996 Pulp industry faces low prices and oversupply. *Jakarta Post*, 15 May, p 10.
- Wiersum, K.F. 1990 Planning agroforestry for sustainable land-use. *In*: Budd, W.W., Duchhart, I., Hardesty, L.H. and Steiner, F. (eds) *Planning for agroforestry*, 18-32. Elsevier, Amsterdam, The Netherlands.
- Wiersum, K.F. 1995 200 Years of sustainability in forestry: Lessons from history. *Environmental Management* 19: 321-9.
- Wildavsky, A. 1987 Choosing preferences by constructing institutions: A cultural theory of preference formation. *American Political Science Review* 81: 2-21.
- Wildavsky, A. and Tenebaum, E. 1981 *The politics of mistrust: Estimating America's oil and gas reserves*. Sage Publications, Beverley Hills, CA.
- Willetts, O. 1996 From Stockholm to Rio and beyond: The impact of the environmental movement on the United Nations consultative arrangements for NGOs. *Review of International Studies* 22: 57-80.
- Wood, G. 1985 The politics of development policy labelling. *Development and Change* 16: 347-73.
- Woodley, S. and Forbes, G. (eds) 1995 *Forest management guidelines to protect native biodiversity in the Fundy Model Forest*. University of New Brunswick, Canada.
- Woodside, K. 1986 Policy instruments and the study of public policy. *Canadian Journal of Political Science* 19: 775-93.
- World Bank 1990 *Indonesia: Sustainable development of forests, land and water*. The World Bank, Washington, DC.
- World Bank 1991 *A World Bank policy paper: The forest sector*. The World Bank, Washington, DC.
- World Bank 1994 *Indonesia: Environment and development*. The World Bank, Washington, DC.
- World Bank 1995 *The economics of long term management of Indonesia's natural forest*, The World Bank, Washington, DC.
- WTO/CTE (World Trade Organization/Committee on Trade and Environment) 1996 *Report of WTO Committee on Trade and Environment*. WTO, Geneva, Switzerland.
- WWF (World Wide Fund For Nature) 1989 *Tropical forest conservation: A position paper*. WWF International, Gland, Switzerland.
- WWF 1991 *Tropical forest conservation*. WWF International, Gland, Switzerland.
- WWF 1994 *The GATT trade and environment work programme: A joint NGO statement*. (122 NGO signatories). WWF International, Gland, Switzerland.
- WWF 1995 *WWF comments on New Work Item proposal 'Guide to the Application of ISO 14001 in the Forestry Sector for Sustainable Forest Management'*. WWF International, Gland, Switzerland.
- WWF 1996a *The WWF 1995 Group: The full story*. WWF UK, Godalming, UK.
- WWF 1996b *Annual report 1995*. WWF International, Gland, Switzerland.
- WWF 1997 *The WWF 1997 forest certification guide*. WWF International, Gland, Switzerland.

- WWF-Canada 1997 1996/97 endangered spaces progress report. WWF Canada, Toronto, Ontario, Canada.
- WWF-Sweden 1998 90,000 hectares FSC-certified through the Forestry Society. Press release, 15 April 1998. WWF-Sweden, Stockholm, Sweden.
- Yin, R. 1989 Case study research: Design and methods. Sage Publications, Newbury Park, CA, and London, UK.
- Zackrisson, O. and Ostlund, L. 1991 Branden Formade Skogslandskapets Mosaik. Skog Forskning 4: 13-17.
- Zerner, C. 1990 Legal options for the Indonesian forestry sector. UTF/INS/065/INS: Forestry Studies Field Document Number VI-4, GOI/FAO, Ministry of Forestry, Jakarta, Indonesia.

Annexes

ANNEX 1.1 FSC MEMBERSHIP STRUCTURE IN JANUARY 1996 AND SEPTEMBER 1997

	Economic		Social/ Environmental 1996	Social 1997	Environ- mental 1997	TOTAL	
	1996	1997				1996	1997
NORTH							
North America	18	27	16	15	22	34	64
Europe	16	39	19	8	37	35	84
Oceania					3		3
Asia					1		1
<i>Sub-total</i>	<i>34</i>	<i>66</i>	<i>35</i>	<i>23</i>	<i>63</i>	<i>69</i>	<i>152</i>
SOUTH							
Latin America	8	13	13	8	12	21	33
Africa	1	2	3	1	4	4	7
Asia	1	2	5	1	2	6	5
Oceania				1	2		3
<i>Sub-total</i>	<i>10</i>	<i>17</i>	<i>21</i>	<i>11</i>	<i>20</i>	<i>31</i>	<i>48</i>
WORLD	44	83	56	34	83	100	200

Note: The social and environmental chambers were separated after June 1996.

Sources: Simula (1996: 193); FSC (1997a)

ANNEX 1.2 FSC MEMBERSHIP STRUCTURE: ECONOMIC INTERESTS CHAMBER

CATEGORY	Number in January 1996	% 1996	Number in September 1997	% 1997
Individuals	14	32	26	32
NGOs	3	7	3	4
NGO certifiers	8	18	11	13
For-profit certifiers	2	5	4	5
Primary forest industry	2	5	5	6
Processing/manufacturing	3	7	4	5
Traders/retailers	6	14	15	18
Others	6	14	14	17
TOTAL	44	100	83	100

Sources: Simula (1996: 193); FSC (1997a)

ANNEX 2.1 THE ADVOCACY COALITION FRAMEWORK HYPOTHESES

Hypotheses concerning Advocacy Coalitions

Hypothesis 1: On major controversies within a policy subsystem when policy beliefs are in dispute, the line-up of allies and opponents tends to be rather stable over periods of a decade or so.

Hypothesis 2: Actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core but less so on secondary aspects.

Hypothesis 3: An actor or coalition will give up secondary aspects of a belief system before acknowledging weaknesses in the policy core.

Hypotheses concerning Policy Change

Hypothesis 4: The policy core (basic attributes) of a governmental programme in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that initiated the programme remains in power within that jurisdiction—except when the change is imposed by a hierarchically superior jurisdiction.

Hypothesis 5: Changing the policy core attributes of a government action programme requires both (1) significant perturbations external to the subsystem (e.g., changes in socio-economic conditions, system-wide governing coalitions, or policy outputs from other subsystems) and (2) skilful exploitation of these opportunities by the (previously) minority coalition within the subsystem.

Hypotheses concerning Coalition Learning

Hypothesis 6: Policy-oriented learning across belief systems is most likely when there is an intermediate level of informed conflict between the two coalitions. This requires that:

- i) each has the technical resources to engage in such a debate; and that
- ii) the conflict be between secondary aspects of one belief system and core elements of the other or, alternatively between important secondary aspects of the two belief systems.

Hypothesis 7: Problems for which accepted quantitative and theory exist are more conducive to policy-oriented learning across belief systems than those in which data and theory are generally qualitative, quite subjective or altogether lacking.

Hypothesis 8: Problems involving natural systems are more conducive to policy-oriented learning across belief systems than those involving purely social or political systems because in the former many of the critical variables are *not* themselves active strategists and because controlled experimentation is more feasible.

Hypothesis 9: Policy-oriented learning across belief systems is most likely when a forum exists which is:

- i) prestigious enough to force professionals from different coalitions to participate;
and
- ii) dominated by professional norms.

Hypothesis 10: Within a coalition, administrative agencies will usually advocate more centrist positions than their interest-group allies.

Hypothesis 11: Even when the accumulation of technical information does not change the views of the opposing coalition, it can have important impacts on policy – at least in the short term by altering the views of policy brokers or other important government officials.

ANNEX 2.2 QUESTIONNAIRE USED DURING THE CASE STUDIES

1. Forest policy problems

- Q1 What are the main problems facing Indonesian/Canadian/Swedish forests today?
- Q2 What are the main policy responses to date?
- Q3 How do you assess the effectiveness of these policy responses?
- Q4 Are new policy responses needed? If so, which ones?

2. Forest Certification

- Q5 Are you aware of any discussions or activities concerning forest certification in Indonesia/Canada/Sweden?
- Q6 If so, which actors are the key participants in these discussions or activities, what role are they playing and what do they want to achieve?
- Q7 Why are these actors interested in certification now?
- Q8 Can forest certification contribute to resolving any of the problems facing forests in Indonesia/Canada/Sweden identified above? If so which problems and how?
- Q8 If a forest certification programme is to work in Indonesia/Canada/Sweden, how should it operate? Are any special preconditions needed?
- Q9 What impacts could certification have at the management unit and policy levels in Indonesia/Canada/Sweden?
- Q10 Could forest certification have negative effects for forestry or forests in Indonesia/Canada/Sweden?
- Q11 How do you see discussions and activities on certification in Indonesia/Canada/Sweden evolving in future?
- Q12 What can other countries or international institutions and initiatives learn from Indonesia/Canada/Sweden's experiences?

3. Policy domain analysis

- Q13 Can you list the most important actors (individual or institutional) in forest policy in Indonesia/Canada/Sweden today?
- Q14 Which are the three most important actors, in order?
- Q15 Which are the least important actors?

4. Profile of Interviewee

- Q16 Name, coordinates
- Q17 Job title and employer
- Q18 Training and education

ANNEX 3.1 POSITIONS TAKEN BY GOVERNMENT DELEGATIONS ON CERTIFICATION AT THE ITTO WORKING GROUP, MAY 1994

Country	Definite support	Tentative support, with reservations	Definitely against	No official position
Austria	*			
Brazil			*	
Cameroon		*		
Canada		*		
Colombia		*		
Congo			*	
Côte d'Ivoire		*		
Ecuador		*		
Finland		*		
Gabon		*		
Indonesia	*			
Japan				*
Liberia		*		
Malaysia		*		
The Netherlands	*			
Peru		*		
Philippines		*		
Papua New Guinea		*		
Sweden	*			
Switzerland	*			
UK		*		
US				*
EU				*

Source: ITTO (1994: Appendix 2)

Note: the Canadian government noted that a domestic scheme was being developed by the Canadian timber industry and expressed support for this. Both the US and Switzerland expressed support for the development of private schemes, without government involvement.

ANNEX 3.2 THE STATUS OF POLICY DEVELOPMENT FOR FOREST CERTIFICATION IN 1997 - AN INTERNATIONAL OVERVIEW

This table only includes countries where certification standards are being actively developed

Country	Status of Certification Policy Development	Implementation: Certified Forests or Certified Forest Management Systems
Australia	Increased national government interest in certification led to hosting of 1996 Brisbane conference. Government policy on certification under development. WWF Australia launched a buyers' group in 1995. National Association of Forest Industries is participating in the ISO forestry working group.	
Austria	1992 act on timber labelling was revised in 1993 creating a quality mark for timber from sustainably managed forests. Various studies have been carried out on certification standards and processes. A buyers' group was established by WWF in 1995. A national mark of origin (Wood-OK) was launched by the timber industry in 1996.	
Belgium	In 1995 a preliminary study on certification was carried out by WWF and a national working group was formed to prepare standards. In 1996 a set of draft standards was prepared and used to certify several forests. Some forest owners associations have been critical of these standards and of certification. A buyers' group was established by WWF in 1996.	66 915 ha of state forests certified by SGS in 1996 but "decertified" at the request of the Wallon government following controversies on certification.
Bolivia	The Bolivian Council for Voluntary Forest Certification was set up in 1994 to bring together stakeholder groups to develop certification standards. It was subsequently recognised by FSC as a national working group. In 1996 a new forestry law was passed which requires independent compliance audits, but proposals for mandatory certification in the law were dropped. Draft standards were completed in 1996.	52 000 ha of forests managed by the Central Intercommunal Campesian del Oriente de Lomerio certified by SmartWood.
Brazil	In 1993 the Brazilian society for Silviculture started to develop the CERFLOR (Certification Florestal) system for certification of plantations and at the same time a national FSC process began. By 1997 draft CERFLOR performance standards had been produced. FSC standards are under development, and harmonisation between the two sets of standards is being considered. IMAFLORA, a Brazilian NGO, has become involved in forest certification.	Two ISO 14001 certifications Bahia Sul and Riocell. In addition, Florestas Rio Doce (1734 ha), Eucatex s.a. (40 128 ha) and Duratex s.a. (47 904 ha) certified by SCS.

Country	Status of Certification Policy Development	Implementation: Certified Forests or Certified Forest Management Systems
Cameroon	A national working group on certification was established in 1996 with EC funding. Draft standards were prepared by early 1997, based on FSC P&C, ITTO criteria and ATO principles, and have been tested by CIFOR.	
Canada	In October 1996, after a three-year-process, the Canadian Standards Association published a systems-based forest certification standard. This is generally supported by industry and provincial governments. In 1996 an FSC working group was set up in Canada and work began on three sets of regional performance standards.	Two small logging operations in British Columbia have been certified by Silva Forest Foundation, which has applied to FSC for accreditation.
Denmark	The Danish government has taken an active role in the certification debate at the national and international level and in 1996 funded a project to derive field-level criteria and indicators from national and international C&I. A FSC working group was set up in 1996 and is working on standards development.	
Finland	The Finnish government has been active in international C&I processes. The government has an objective of having an operational national certification system by 1998. In 1996 a multistakeholder working group on standards development was set up by forest owners, industry and NGOs. Draft standards were produced in 1997 and are being tested. Several NGOs have stated that these standards are not adequate for certification and that they should be further developed in a national FSC working group but other actors do not seem to support this.	
Germany	In 1992 Initiative Tropenwald was launched by the German wood industry, timber importers and a trade union with government support. The objective was to develop a tropical timber labelling scheme. Considerable work was done on standards development. In 1996 the Initiative was reshaped into a labelling scheme for chain-of-custody tracking in the EU. The German government has been one of the main supporters of CIFOR's C&I project. The German paper industry has been actively involved in the debate on certification as a major pulp consumer. A buyers' group was established in 1997.	

Country	Status of Certification Policy Development	Implementation: Certified Forests or Certified Forest Management Systems
Ghana	In 1996 the government established a national certification committee with the participation of stakeholder groups. The Ghana Standards Board has participated as well as ICED and SGS. A draft standard has been developed, based on the government forest department's forest management system. It contains both performance and systems components and is intended to be compatible with ITTO, ATO and FSC criteria.	
Indonesia	In 1993 the association of concession holders began to develop a certification system which eventually evolved into an internal auditing scheme, and was replaced by the certification system developed by an NGO Lembaga Ecolabel Indonesia with government support. The Indonesian standard was completed in April 1997 and submitted to the national standards body for approval.	The forest operations of P.T. Wirakarya Sakti (Sumatra) have been certified to ISO 14001.
Malaysia	In 1994 the government established a committee to adapt and develop ITTO criteria for use in Malaysia. A set of draft criteria at national, state and forest management-unit levels were prepared in 1997. It is intended to set up an independent body, the National Timber Certification Council to use these criteria for certification.	Kumpulan Guthrie Berhad, Johor (251ha) and Deramakot Forest Reserve (55 000ha) Sabah certified by SGS.
The Netherlands	The Dutch government has supported ITTO's target 2000 and anticipates importing timber from sustainably managed sources by that date. In 1996 the Dutch timber trade established the Kerhout Foundation to label timber from sustainably managed forests. The government established joint working groups with Cameroon, Gabon, Indonesia and Ghana to discuss criteria for sustainable forest management and the Kerhout labelling scheme. In March 1997 the government issued a set of "minimum requirements" for the labelling of timber from well-managed forests, referring to international C&I and FSC P&C. The Dutch NGO campaign "Heart for Wood" has expressed reservations about this approach. A Dutch buyers' group was set up by FOE in 1995.	Koninklijke Houtvesterij Het Loo (8058 ha), Gemeentebossen Ede (2044 ha) and Gemeentebossen Arnhem (1302 ha) certified by SKAL.

Country	Status of Certification Policy Development	Implementation: Certified Forests or Certified Forest Management Systems
Norway	In 1997, "Living Forests", a project for promoting sustainable forest management in Norway supported by forest owners, forest industry, government, trade unions, NGOs and other stakeholders developed a set of preliminary certification standards, with reference to the pan-European C&I and FSC P&C.	
Solomon Islands	Certification standards development began in 1996. A local NGO, Soltrust, is developing its capacity to become a certifier.	12 small-scale forestry enterprises totalling 3386 ha certified by SGS.
Sweden	A Swedish FSC working group developed certification standards, which were submitted to the FSC board in September 1997. Forest owners associations withdrew from the process in May 1997.	Stora, Ludvica forest management district (300 000ha) certified by SCS. AssiDomän (two districts covering 60 700 ha) certified by SGS.
Switzerland	Draft FSC certification standards were produced by the Swiss FSC working group in 1995. Because of controversies between NGOs and forest owners the Swiss FSC working group was dissolved in 1996. A buyers' group was launched in 1997.	
UK	A FSC working group was formed in 1995 and draft national standards produced in 1996. Forest owners, the government and forest industry have often been critical of FSC but the government Forestry Commission has explored options for collaboration on certification with FSC.	8 small forest owners totalling 3164 ha certified by Woodmark and 21 woodlands covering 2037 ha certified under group certification by SGS.
US	The American Forest and Paper Association (AF&PA) launched the Sustainable Forestry Initiative in 1992. This includes some elements of third-party assessment of forest management but is not intended to be a certification scheme. It is implemented by all AF&PA members as a condition of membership. AF&PA has generally opposed certification, particularly performance-based certification.	2 divisions of Collins Pine Company (86 000 ha), Big Creek Lumber Company (3700 ha) and Seven Islands Land Company (364 000 ha) certified by SCS.
	Under the FSC US initiative, eight regional working groups are in the process of developing regional standards.	Menominee Tribal Enterprises (95 000 ha) certified by SCS and SmartWood. Keweenaw Land Association (63 000 ha), Quabin Reservoir Lands (23 482 ha) and 8 small land owners totalling 10 2080 ha Certified by SmartWood.

ANNEX 4.1 CHRONOLOGY OF INTERVIEWS

Date (in 1996)	Name	Institutional Affiliation	Advocacy Coalition
20 July	Prof. Jeff Sayer	Director General, CIFOR	---- (not clearly aligned with a coalition)
20 July	Dr Togu Manurung	Lecturer in Forest Economics, Agricultural University of Bogor (IPB)	Environmental
22 July	Dr Willi Smits	Personal advisor to the Minister of Forestry (and team leader TROPENBOS project)	Forestry
25 July	Ir Herman Prayudi	Association of Indonesian Forest Concession Holders (APHI)	Forestry
26 July	Dr Elias(*)	Lecturer in Forest Management and Harvesting (IPB)	Forestry
30 July	Ir Mia Siscawati (+)	Executive Director, Indonesian Institute for Forest and Environment (RMI)	Environmental
31 July	Dr Ravi Prabhu	Staff Scientist, CIFOR	----
1 August	Dr Neil Byron	Deputy Director General, CIFOR	----
2 August	Ir Hendro Prastowo	Deputy Executive President, APHI	Forestry
2 August	Mr. Petrus Subroto	Marketing Manager, Perum Perhutani (State-owned forestry enterprise)	Forestry
2 August	Ms Asmeen Khan and Ms Surya Afiff	Institutional Specialist and Research Assistant, The World Bank	----
2 August	Ir Titus Sarijanto (+)	Director General, Forest Utilization, Ministry of Forestry	Forestry
3 August	Ir Tri Nugruho (+)	Executive Director, The Indonesian Tropical Institute (LATIN)	Environmental
5 August	Ir Indah Suksmaningsih	Indonesian Consumers Organization, YKLI	Environmental
5 August	Ir Effendy Sumardja	Assistant Minister for Planning, State Ministry of Environment	Ministry of Finance
6 August	Dr Toga Silitonga (*)	Director General, Forest Resource and Development Agency, Ministry of Forestry.	Forestry

Date (in 1996)	Name	Institutional Affiliation	Advocacy Coalition
6 August	Dr Michael Groves	Technical Advisor, Qualitech Perdana (SGS)	-----
6 August	Mr Lili Hasanuddin and Ms Nina Dwisasanti	Forest Campaigners, Indonesian Forum for the Environment, WALHI.	Environmental
7 August	Ir Ria Rosmayanti	Directorate for Technical Development, Environmental Impact Management Agency (BAPEDAL)	Ministry of Finance
7 August	Dr Benny Sormin	Head of Multilateral Division, Ministry of Forestry	Forestry
7 August	Ms Upik Wira Djalins	Economist, Indonesian Ecolabelling Institute, LEI	Environmental
8 August	Dr Alistair Fraser	Programme Coordinator, ODA-Ministry of Forestry Tropical Forest Management Programme	-----
8 August	Mr Christopher Bennett	Forest Policy Advisor, Natural Resources Management Project (USAID)	-----
8 August	Dr Emil Salim	Former Minister of Environment, Chair of LEI working group	Environmental
8 August	Dr Riga Ardiwoso Suprpto	Lecturer, Department of Economics, University of Indonesia	Environmental
8 August	Ir Hariadi	PhD Candidate in Forest Policy, IPB	Environmental
8 August	Ir Asep Suntana (+)	Forester, LEI	Environmental
9 August	Mr Mohamed "Bob" Hasan	President, Indonesian Forestry Community, MPI	Forestry

Notes: "Informal conversational interviews" in which the full questionnaire was not used are indicated with an asterisk (*) by the respondent's name.

Individuals indicated with (+) were interviewed again in July 1997 to collect information about developments in the previous 12 months.

In addition, Professor Achmad Soemitro, former Dean of the Department of Forestry, Yogyakarta University (Forestry Coalition), was interviewed in Kyoto on 19 April 1997; Ms Liana Bratasida, Technical Director of the Environmental Impact Management Agency (Ministry of Finance Coalition), was also interviewed in Kyoto on 20 April 1997; and Dr Dwi Sumardiyono, Assistant Director of PT Dwima, was interviewed in Jakarta on 29 July 1997.

ANNEX 4.2 SUMMARY OF INFORMATION FROM INTERVIEWS

Annex 4.2A Summary Tables, with data organised by question

Abbreviations:

MF: Ministry of Forestry
 ME: Ministry of Environment
 PS: Private sector
 ACA: Academics
 INT: International Organisations
 CRT: Certifiers
 T: Total

Table 1. Problems in Indonesia's forests today

Notes: Data in table (and the problems listed in column 2) are derived from respondents' answers to Question 1 "What are the main problems facing Indonesian forests today?" The numbers in the columns on the right of the table indicate the number of respondents mentioning each problem.

Category of forest policy problems	Problems mentioned by respondents	Respondents							
		MF	ME	PS	NGO	ACA	INT	CRT	T
Land classification	1. Land classification done in centralised manner with inadequate field data				1				1
Forest revenue system	1. Forest revenue system inadequate (insufficient rent capture by MOF)				1	1	1	1	4
Forest management	1. Neglect of social and environmental issues in forest management		1	1	2	1	2		7
	2. Poor quality of forest management	1		1	1	1	1		5
	3. Overharvesting	1			2	1	1		5
	4. Shifting cultivation in concessions	1		2					3
	5. Inadequate MOF control of concessionaires	3		3	2	2	2	3	15
	6. Inadequate MOF information on forest resources	2		1		1	1		5
	7. Regulations focus on logging rather than forest management				1		2		3

Annex 4.2A Table 1. *Continued*

Category of forest policy problems	Problems mentioned by respondents	Respondents							
		MF	ME	PS	NGO	ACA	INT	CRT	T
	8. Regulations are confusing/contradictory				1				1
	9. Division of labour between central and provincial governments suboptimal						1		1
	10. Inadequate forest planning							1	1
	11. Inadequate technical capacity for management by concessionaires			3			1		4
	12. Short time-horizon of concessionaires						2	1	3
	13. Illegal activities by concessionaires Problems mentioned by respondents			1		1			2
Land tenure	1. Land tenure system favours concessionaires more than local communities				3	1	1	2	7
	2. Overlapping claims; lack of tenure security			1		1	2	1	5
	3. Conversion of production forests to agriculture					1	1		2
Forest plantations	1. Conversion of production forests to plantations					1	2		3
Forest industry	1. Potential development of pulp and paper industry without adequate raw material		1						1
	2. Excess industrial capacity leading to overharvesting				1		2		3
Protected areas	1. Insufficient resources for protected areas		1						1

Annex 4.2A Table 1. *Continued*

Category of forest policy problems	Problems mentioned by respondents	Respondents							
		MF	ME	PS	NGO	ACA	INT	CRT	T
Other	1. Corruption				1	1	1	3	6
	2. Lack of transparency in the forest sector				2		1	3	6
	3. Population pressure on forests.						1		1
	4. International criticism of Indonesian forestry				2				2
	Not classified							1	1
	TOTAL	9	2	15	18	13	25	16	98

Comments:

1. The most frequently identified problem (mentioned by respondents from all interest groups apart from the Ministry of the Environment), is inadequate Ministry of Forestry control over the operations of concessionaires.
2. The Ministry of Forestry and the private sector do not mention any problems in the areas of the forest revenue system, land classification or forest tenure. Corruption and lack of transparency are not cited either.

Table 2. The main policy responses to date to Indonesia's forest problems

Policy response	Respondents						
	MF	ME	PS	NGO	ACA	INT	CRT T
Stricter implementation of regulations, sometimes leading to fines or cancellation of concessions	3		2	2	2	2	3 14
Certification	2		1	1		4	1 9
KPHP (reform of concession system)				1		5	6
Improved forest monitoring through remote sensing	2		3				5
"Forestry for People" – agroforestry and social forestry	1			1			2
Plantation establishment	1			1			2
Research on forest type classification for improved land-use planning	1						1
Improved operational planning	1						1
Transfer of private concessions to state forestry corporations					1	1	2
Problem is implementation of existing regulations rather than need for new ones						1	1
No serious efforts at present to provide new policy responses				2	3		2 7

Note: Data from respondents' answers to Question 2 "What are the main policy responses to date?"

Comments:

1. Neither the Ministry of Forestry respondents nor those from the private sector mention KPHP.
2. The policy responses that are mentioned by most respondents are the "crackdown" on concessionaires, and then certification.
3. NGOs, academics and certifiers are most critical of the current policy responses.
4. Only respondents from the Ministry of Forestry and the private sector refer to improved forest monitoring through remote sensing and forest type classification.
5. Certification is already seen as a policy response, even though the LEI programmes not being implemented in 1997.

Table 3. The effectiveness of current policy responses and the need for new measures

Policy responses	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
1. Current policy responses								
Quite effective	1		2		1			4
Too early to assess				1	1	1	2	5
Promising results	1	1						2
Not very effective					1	2	1	4
Ineffective				1		1		2
2. Need for new measures?								
No new responses needed	1							1
Stricter monitoring of concessions	1			1	1			3
Certification	3		3	1	2	1	2	12
KPHP					1	2	1	4
Strengthen technical capacity of MOF and concessionaires			1					1
Promote community forestry				2	1	1	2	6
Fundamental policy reform needed				3	4	3	3	13
Privatisation of forest ownership					1	1		2

Note: Data from respondents' answers to Questions 3 and 4 "How do you assess the effectiveness of these policy responses?" and "Are new policy responses needed? If so, which ones?"

Comments:

1. There appears to be a difference in perspective between the government and the private sector on one hand, whose respondents tend to see the existing policy responses as effective or promising, and the other categories of respondents who are either more cautious or more critical.
2. Similarly, differences can be found between these groups on the need for basic policy reform, which NGO, academic, international organisation and certifier respondents tend to mention as being more important than certification.

Table 4. Reasons for emergence of certification as a policy response now

Reasons mentioned	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
ITTO Target 2000	2		4	1	2	5	1	15
International pressures on Indonesian exports			2	2	1	4	3	12
Trends towards deregulation and use of market instruments					3		2	5
Minister of Forestry committed to sustainable forest management	1						1	2
Concerns in MOF about forest depletion				1	1			2
Increased technical capacity of NGOs – now able to participate in technical discussions on forestry							2	2

Note: Data comes from respondents' answers to question 7 "Why are these actors interested in certification now?"

Comments:

1. ITTO Target 2000 is seen as an important factor by all groups of respondents except the Ministry of Environment. However only one respondent each from the categories of NGOs, academics and certifiers mentioned it.
2. The Ministry of Forestry respondents did not mention international pressures as a factor.

Table 5. Why are actors in the forest policy domain interested in certification now?

Reasons given	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
MOF wants to increase control over concessionaires	3			2	3	2	4	14
MOF wants to maintain market share of Indonesian exports and respond to international pressures			1	2	1	2		5
MOF wants to take steps to implement ITTO Target 2000	1		1			1		3
Private sector wants to maintain market share of Indonesian exports			2	3	1	4	2	12
Private sector wants to take steps to implement ITTO Target 2000			1			1		2
Private sector sees certification as inevitable	1			1			1	3
Investors want objective information on status of forest management in concessions	1							1
NGOs want increased transparency in forest sector and more control to be exerted over concessionaires	1				1	1	2	5
NGOs want to introduce social issues and community forestry to forest policy agenda				1	2	2	1	6
NGOs want a tool to promote sustainable forest management			1	1		2	1	4
NGOs want a tool to put industry under pressure						1		1
MOE is interested in supporting sustainable forest management		1						1
Trend towards use of market instruments to solve public policy problems					1		1	2

Note: Data from respondent's answers to Question 6 "If so, which actors are the key participants in these discussions or activities, what role are they playing and what do they want to achieve?"

Comments:

1. The Ministry of Forestry respondents do not mention the need to satisfy international pressures as a factor.
2. The most frequently mentioned reasons were the Ministry of Forestry wanting to increase control over concessionaires (though was not mentioned by the private sector respondents), and the private sector's wish to retain market share.
3. Several respondents (but none from the government or the private sector) said that NGOs wanted to introduce social issues into the forest policy agenda.
4. Several respondents said that the private sector sees certification as inevitable, but none from the private sector mentioned this.

Table 6. Which problems can certification help solve?

Problems	Respondents							T
	MF	ME	PS	NGO	ACA	INT	CRT	
Transparency and control over concessionaires	2		2	1	1	2	4	12
Helping concessionaires learn and progress towards sustainable forest management			1	1		1	1	4
Recognition of community forestry				3		1		4
Provide incentives for sustainable forest management	1	1		1		1		4
Increase dialogue between concessionaires NGOs and academics on sustainable forest management				2	1	1		4
Reduce international criticism of Indonesia and pressures in export markets			2					2
Certification alone cannot resolve problems: policy reform is needed					1	3	1	5
Certification may not change much						2		2

Note: Data from respondents' answers to Question 8 "Can forest certification contribute to resolving any of the problems facing forests in Indonesia identified above? If so, which problems and how?"

Comments:

1. Recognition of community forestry is mentioned by NGO respondents but not by government or private sector respondents.
2. Government respondents, the private sector and NGOs did not mention the need for policy reform accompanying certification.
3. Respondents from international organisations were the most dubious about the capacity of certification to solve problems.

Table 7. Programme structure and preconditions for certification in Indonesia

Nature of programme	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
Voluntary market incentive	1		1	3	3	2	3	13
Linked to international system (ISO, FSC etc)	1				2	3		6
Independent of MOF and APHI	1			1	3	1		6
Programme to include on-ground verification					1	1	1	3
Certification should be part of a policy package					1	2		3
Obligatory	2		1					3
Whatever system works		1						1

Note: Data come from respondents' answers to Question 9 "If a forest certification programme is to work in Indonesia, how should it operate? Are any special preconditions needed?"

Comments:

1. There was little support for the concept of certification as part of a policy package, apart from international organisation respondents.
2. Ministry of Forestry and private sector respondents differed among themselves on whether certification should be voluntary or obligatory. Voluntary certification was supported by other respondents.

Table 8. Impacts of certification

Impacts	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
Impacts at level of concession								
1. Increased transparency and control	3		2	1	3	2	4	15
2. Encouragement of learning and improvements by concessionaires			1	1		2		4
3. Incentive to concessionaires for improved management		1						1
Impacts at policy level								
1. Field inspections will reveal problems that need to be addressed by policy (policy learning)				2	4	2	4	12
2. Support to community forestry				2				2
3. LEI could play advocacy role				1				1
4. Certification is not related to policy			1					1

Note: Data from respondents' answers to Question 10 "What impacts could certification have at the management unit and policy levels in Indonesia?"

Comments:

1. The main benefit of certification mentioned by respondents from all interest groups, apart from the Ministry of the Environment, was increased transparency and control.
2. Respondents from the Ministry of Forestry and the private sector did not mention any policy impacts that might be associated with certification, whereas respondents from the groups of NGOs, academics, international organisations and certifiers did. The contribution of certification to a "policy learning" process was mentioned in particular.
3. Only some NGO respondents mentioned a link between certification and community forestry.

Table 9. Potential negative effects of certification

Impacts	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
Diversion from necessary policy changes				1		4		5
Time-waster if programme fails			1		2	2		5
Diversion from conversion of natural forests to plantations						2		2
Bias against small producers				1				1

Note: Data from respondents' answers to Question 11 "Could certification have negative effects for forestry or forests in Indonesia?"

Comments:

1. Respondents from international organisations identified the greatest number of potential negative impacts. Government respondents did not mention any.

Table 10. Future evolution of certification in Indonesia

Future developments	Respondents							T
	MF	ME	PS	NGO	ACA	INT	CRT	
Voluntary programme implemented by LEI			1	2	2		3	8
Obligatory programme (instrument of control of MOF)	3		1			1		5
Limited impact						1		1
Uncertain, may be a passing phenomenon				1	1	3	1	6

Note: Data from respondents' answers to Question 12 "How do you see discussions and activities on certification in Indonesia evolving in future?"

Comments:

1. Respondents from the Ministry of Forestry expect certification to be obligatory in the future. Private sector respondents are divided, whereas NGO, academic and certifier respondents expect it to be voluntary.
2. International organisation respondents were the most uncertain concerning the future viability of certification.

Table 11. Actors in the forest policy domain in Indonesia

Actors mentioned	Respondents							
	MF	ME	PS	NGO	ACA	INT	CRT	T
Most influential actors								
1. Ministry of Forestry	3	2	2	3	4	6	3	23
2. Private sector (APHI)	3	2	2	3	4	6	3	23
3. Presidency				3	3	4	2	12
4. State forestry corporations (Inhutanis)					1			1
5. Provincial Authorities					1			1
6. ITTO		1						1
7. Emil Salim (as an individual)						1		1
Least influential actors								
1. NGOs	2			3	3	5	2	15
2. Local communities				2	1	4	1	8
3. Academics/scientists					2	2	1	5
4. Provincial governments					1			1

Note: Data from respondents' answers to Questions 14, 15 and 16 "Can you list the most important actors (individual or institutional) in forest policy in Indonesia today"? "Which are the three most important actors, in order"? "Which are the least important actors?"

Comments:

1. The Ministry of Forestry and the private sector do not mention the Presidency as an influential actor.
2. The two key interest groups appear to be the Ministry of Forestry and the private sector.

Annex 4.2B Summary Tables, with data organised by interest group

Table 1. Why is certification on the policy agenda in Indonesia now?

Respondent	Key points mentioned
Ministry of Forestry	<p>ITTO Target 2000</p> <p>Minister committed to sustainable forest management</p> <p>Ministry needs tools to improve control over concessionaires</p> <p>“Even if certification does not bring international benefits, there will be domestic benefits such as increased control over concessionaires”</p>
Private sector	<p>ITTO Target 2000</p> <p>Pressure on Indonesian timber exports in Europe and North America</p> <p>“Ecolabelling can help concession holders be more aware of problems in their concessions and should reassure international opinion and markets”</p>
NGOs	<p>International pressures on Indonesian exports</p> <p>MOF needs to control concessionaires better and respond to international pressures</p> <p>“The Ministry of Forestry is now aware of the need to balance the supply and demand of timber”</p>
Academics	<p>Trends towards the use of market instruments and deregulation</p> <p>ITTO Target 2000 and international pressures may also be a factor</p>
International organisations	<p>ITTO Target 2000 and international pressures on Indonesia’s exports as well as increased NGO technical capacity allowing them to contribute to policy debate</p>
Certifiers	<p>International pressures on Indonesian exports</p>

Note: The Ministry of Environment is not included in this table (or the ones that follow) because only one official was interviewed, and there is a risk that his views may not be representative.

Sources: Tables 4 and 5 in Annex 4.2A

Table 2. Who is promoting certification and why?

Respondent	Key points mentioned
Ministry of Forestry	Ministry wants improved control over concessionaires
Private sector	Private sector wants to maintain market share Some see certification as inevitable
NGOs	NGOs want to promote community forestry, and increased attention to social and environmental issues in concessions
Academics	MOF wants to improve control over concessionaires NGOs want to introduce social and environmental issues into forest policy debate and support community forestry.
International organisations	Private sector wants to maintain market share of timber exports MOF wants to increase control over concessionaires and NGOs want to promote social and environmental issues.
Certifiers	MOF wants to improve control over concessionaires, private sector wants to maintain market share of timber exports NGOs want improved transparency and control

Sources: Tables 4, 5, 6 and 11 in Annex 4.2A

Table 3. How should the proposed certification programme be constructed?

Respondent	Key points mentioned
Ministry of Forestry	Respondents said the programme should be obligatory Some mentioned that it should start as voluntary and then become obligatory
Private sector	Respondents divided on whether programme should be voluntary or obligatory
NGOs	Voluntary programme implemented by LEI in the near future (i.e., before 2000)
Academics	Voluntary programme which provides a market incentive to concessionaires Should be independent of MOF and APHI Linked to international framework such as ISO or FSC
International organisations	Voluntary market incentive linked to FSC or ISO Part of a policy package
Certifiers	Voluntary market incentive

Note: The original research question was “How is the proposed certification programme constructed?” However, since the programme was not finalised when the questions were asked, an effort was made to identify participants’ preferences as to how the programme should be set up.

Table 4. How might certification develop in the future?

Respondent	Key points mentioned
Ministry of Forestry	Obligatory programme implemented in time for ITTO target 2000
Private sector	Programme ready for implementation by 2000
NGOs	Some respondents expected LEI's programme to be implemented on a voluntary basis One respondent uncertain
Academics	Similar to NGOs
International organisations	Most respondents uncertain on how certification will evolve
Certifiers	Most certifiers expected a voluntary programme, implemented by LEI

Annex 4.3 LEI Criteria and Indicators of Sustainable Forest Management at the Management Unit Level

Management Dimension	Outcome Dimension						
	Production			Ecosystem		Social	
	Sustainability of resources	Sustainability of production	Sustainability of business profitability	Ecosystem stability	Survival of endemic/protected species	Equity	Community participation
1. Forest Management 1.1 Area	1. Conformity with forest land use (formerly forest land use by consensus), provincial land use and present land utilisation 2. Status of boundary demarcation (finalisation and payment) 3. Finalisation of gazettal of the boundaries by the Ministry of Forestry 4. Physical quality of boundary marking	1. Conformity with planned annual production	1. Conformity with economies of scale of business	1. Ratio of protected area gazetted to total management unit area 2. Ratio of established germplasm conservation area to total management unit area 3. Ratio of established buffer zone area and wildlife corridor (if exists) to total management unit area (whose existence can be proven in the field)	1. Proportion of germplasm conservation area established based on consideration of endemic/protected species or unique ecosystem 2. Proportion of buffer zone area and wildlife corridor (if exists) established based on consideration of endemic/rare/protected species or unique ecosystem	1. Acknowledgement of land tenure based on local traditional law as regulated by the law	1. Level of community's participation in decision making of area demarcation based on existing community's social institutions
1.2 Area Organisation	1. Area organisation based on protected and production area 2. Area organisation based on forest types	1. Division into blocks and compartments 2. Division into production unites based on location and time	1. Improvement of stand quality	1. Proportion of protected area clearly demarcated in the field 2. Proportion of germplasm conservation area already demarcated in the field 3. Proportion of buffer zone area and animal corridor demarcated in the field	1. Type and frequency of security patrols for protected area, germplasm conservation area, buffer zone and wildlife corridor in vulnerable area	1. Guarantee extended to community access to NTFPs in the working area prescribed by local traditional customs. 2. Availability of area for community forestry	1. Level of organisational conflicts occurring in the working area 2. Level of local community's involvement in deciding the form of forestry community's activities

Management Dimension	Outcome Dimension						
	Production			Ecosystem		Social	
	Sustainability of resources	Sustainability of production	Sustainability of business profitability	Ecosystem stability	Survival of endemic/protected species	Equity	Community participation
1.3 Area Security	<p>1. Action to prevent forest encroachment</p> <p>2. Action to prevent conversion to other functions</p>	<p>1. Preventative actions against illegal cutting</p> <p>2. Preventative actions against unregulated harvesting of NTFPs</p>	<p>1. Adequacy of forest rangers</p>	<p>1. Type, frequency and form of security patrols for protected area, germplasm conservation area, buffer zone and wildlife corridor in vulnerable area</p> <p>2. Number and arrangement of signs related to security of protected area, germplasm, buffer zone and animal corridor</p> <p>3. Percentage of virgin forest cover in protected area, buffer zone and wildlife corridor</p> <p>4. Difference of flora and fauna species diversity between protected area and virgin forest area within similar forest formation/type</p> <p>5. Percentage of communities that acknowledge the existence of protected area/ germplasm conservation area/ wildlife corridor and buffer zone area</p>		<p>1. Level of community's involvement in maintaining security of timber logging in accordance with local social institutions, norms and value systems based on traditional law</p>	

Management Dimension	Outcome Dimension						
	Production			Ecosystem		Social	
	Sustainability of resources	Sustainability of production	Sustainability of business profitability	Ecosystem stability	Survival of endemic/protected species	Equity	Community participation
2. Forest Stand Management 2.2 Production Management	1. Selection, implementation and development of silvicultural system	1. Inventory prior to harvest 2. Stand inventory to produce stand classification 3. Logging damage 4. Exploitation efficiency factor 5. Regeneration 6. Stand improvement 7. Monitoring of permanent sample plot of increment 8. Justification that Annual Allowable Cut is not exceeding the increment 9. Consistency of timber harvesting activities as planned 10. Consistency of regeneration activities as planned 11. Statistics of plantation performance 12. Statistics of production performance 13. Comprehensive working plan on agricultural activities	1. Information/ reporting system of silvicultural practices	1. Impact magnitude and intensity on forest structure and species composition 2. Impact magnitude and intensity on land and water	1. Damage intensity to endemic/rare/ protected plants and habitats 2. Damage intensity to wild endemic/ protected/rare wildlife species and habitats	1. Development of silviculture system which minimises the loss of NTFPs considered traditionally important	1. Level of community's involvement in deciding on protected vegetation types/ species that are considered traditionally important 2. Employment opportunities for local workers in maintaining silviculture activities

Management Dimension	Outcome Dimension						
	Production			Ecosystem		Social	
	Sustainability of resources	Sustainability of production	Sustainability of business profitability	Ecosystem stability	Survival of endemic/protected species	Equity	Community participation
2.2 Ecosystem Management	<p>1. Availability of indicative map on environmental impacts on forest production areas</p> <p>2. Socialisation of various functions and utilisation of forest</p>	<p>1. Intensity and quality of forest infrastructure</p> <p>2. Erosion control in skidding road, logging road, log-yard and physical construction areas</p>	<p>1. Implementation of impact mitigation and monitoring plan in production forest areas</p>	<p>1. Special security actions for protected areas/germplasm conservation area/ buffer zone and animal corridor in logging and skidding activities in nearby cutting block</p> <p>2. Determination of felling direction and skidding techniques minimise impact on forest structure and species composition</p> <p>3. Effectiveness of techniques of environmental impact mitigation on water and land</p> <p>4. Effective rehabilitation to damage of structure and composition of stand</p>	<p>1. Security action for endemic/rare/ protected plants</p> <p>2. Security action for endemic/rare/ protected wild animals' habitat</p>	<p>1. Level of adherence to traditional law for environmental impact management</p>	<p>1. Level of community's involvement in deciding the types of environmental impact management activities</p> <p>2. Employment opportunities for local workers in environmental impact activities</p>
2.3 Social Management	<p>1. Socialisation of legal aspect and communal rights of the area</p> <p>2. Development of community and private silvicultural system forest</p>	<p>1. Regulation of forest products utilisation/ improvement of community forest supports</p>	<p>1. Formation of business partnership with local people</p> <p>2. Role in regional economic development</p>	<p>1. Type and frequency of extension concerning the importance of forest ecosystem as life support system</p> <p>2. Type and frequency of extension concerning the impact of over-exploitation of forest ecosystem on NTFPs by the community</p>	<p>1. Type and frequency of extension concerning protected/endemic/ rare plants and wild animals</p> <p>2. Community perception concerning protected/endemic/ rare plants and wild animals</p>	<p>1. Level of interest and commitment towards improving the economic activities and improvement of forest-dependent communities</p> <p>2. Level of interest and commitment in preserving the cultural adaptability and incorporation of</p>	<p>1. Local community's involvement in utilising available funds and in deciding on the design of community development activities that is in conformity with local traditions</p> <p>2. Employment of local workers in community</p>

Management Dimension	Outcome Dimension						
	Production			Ecosystem		Social	
	Sustainability of resources	Sustainability of production	Sustainability of business profitability	Ecosystem stability	Survival of endemic/protected species	Equity	Community participation
2.3 continued				3. Community perception of the importance of forest as life supporting system		local people's aspirations in designing community development and activities	development activities
3. Institutional Management 3.1 Organisation	1. Formation of business partnerships with local people 2. The role in regional development	1. Clear organisational units of planning, production and stand improvement 2. Management Information System 3. Clear mechanisms of control management system	1. Clear organisational units of financial and administrative affairs 2. Clear units of marketing/ distribution 3. Clear unit of internal audit 4. Managerial/ business decision-making mechanism	1. Existence of special division dealing with ecology and environmental; issues 2. Existence of biodiversity and environmental information system		1. Increase in household income of the local community 2. Village's earnings from the management unit company 3. District's earnings from the management unit company 4. County's earnings from the management unit company 5. Province's earnings from the management unit company	1. Level of incorporation of local wisdom in forest management in the designing of management's strategies
3.2 Human Resources	1. Education and training for forest security force 2. Availability of professionals for forest planning	1. Education and training for cutting and skidding team 2. Education and training for area infrastructure team 3. Education and training for silvicultural manpower 4. Availability of professional manpower for forest stand improvement	1. Availability of professional manpower for management and business 2. Assignment of professional foresters as camp managers 3. Transparent career paths 4. Appreciation/ incentives based on working performance	1. Human resources specifically assigned in management of protected area, germplasm conservation area, buffer zone and wildlife corridor 2. Human resources responsible for forest ecosystem damages as a result of forest harvesting (for timber and NTFPs)	1. Human resources specifically assigned in management of protected plants and wild animal species	1. Activities in improving education and skills of local people/community 2. Availability of professional workers in handling community development activities	1. Level of community's involvement in determining the needs for education and training 2. Employment opportunities to local workers in types of work and position

Management Dimension	Outcome Dimension						
	Production			Ecosystem		Social	
	Sustainability of resources	Sustainability of production	Sustainability of business profitability	Ecosystem stability	Survival of endemic/protected species	Equity	Community participation
3.3 Finance	1. Investment in forest area organisation 2. Investment in forest area security	1. Payment of levies 2. Continuity and regularity in financing silvicultural practices 3. Investment in infrastructure, base camp and supporting camp, forest infrastructure and equipment and maintenance	1. Investment in marketing and consumer services 2. Rentability, profitability and solvency of the company 3. Payment of land-based taxes	1. Funding allocation to management of protected areas, germplasm conservation area, buffer zone and wildlife corridor 2. Funding realisation allocation to impact management of forest structure and species composition, including forest rehabilitation 3. Funding realisation allocation to impact on water and land 4. Funding realisation allocated to extension with regard to importance of forest ecosystem as life support system and negative impact of overharvesting of NTFPs	1. Funding allocation for management and monitoring of protected/ endemic/ rare plant and wild animal species 2. Funding allocation to extension activities concerning vegetation and endemic/rare/ protected wildlife	1. Amount of funds realised for development activities 2. Level of conformity with the needs and aspirations of the community in designing community development activities	1. Level of local community involvement in determining the utilisation of available funding set aside for various community development activities

Source: LEI (1997b)

ANNEX 5.1 CHRONOLOGY OF INTERVIEWS IN CANADA

Date	Name	Institutional Affiliation	Advocacy Coalition
31 July 1995	Mr Tony Rotherham	Sustainable Forestry Certification Coalition	Forestry
1 August 1994	Mr David Drake	Director, International Affairs, Canadian Forest Service.	Forestry
2 August 1994	Mr David Boulter	Director, Economic Studies, Canadian Forest Service.	Forestry
2 August 1995	Dr David Brand	Director, Sustainable Development Division, Canadian Forest Service.	Forestry
2 August 1995	Mr Jacques Carette	Director-General, Industry, Canadian Forest Service	Forestry
2 August 1995	Mr David Neave	Executive Director, Wildlife Habitat Canada (NGO).	Forestry
4 August 1995	Dr Frank Frantisak	Senior Vice-President, Environment, Noranda Inc.	Forestry
6 August 1995	Mr Everett Deschenes	Manager, Forest Policy and Planning, Fraser Inc.	Forestry
7 August 1995	Dr Ian Methven	Dean, Faculty of Forestry and Environmental Management University of New Brunswick	——(not clearly aligned with a coalition)
7 August 1995	Dr Graham Forbes	Co-ordinator, Greater Fundy Ecosystem Research Project	Environmental
7 August 1995	Dr David Coon	Policy Director, New Brunswick Conservation Council	Environmental
9 August 1995	Mr Tom Spinney	Executive Director, Timber Management, New Brunswick Department of Natural Resources and Energy	Forestry

Date	Name	Institutional Affiliation	Advocacy Coalition
9 August 1995	Mr Ron Loughrey	Director, Environmental Stewardship, New Brunswick Department of Natural Resources and Energy	Forestry
9 August 1995	Ms Roberta Clowater	Co-ordinator, New Brunswick Endangered Spaces Campaign, WWF (NGO)	Environmental
16 August 1995	Mr Monte Hummel *	President, WWF-Canada	Environmental
17 August 1995	Mr Ahmad Hussein *	Secretary, Canadian Standards Association Sustainable Forest Management Technical Committee	—
19 August 1995	Ms Elizabeth May *	Executive Director, Sierra Club of Canada	Environmental
21 August 1995	Mr Mike Innes *	Abitibi-Price Inc.	Forestry
2 October 1995	Dr Ken Armson	Retired Professor of Forest Soils, University of Toronto	Forestry
18 November 1996	Mr Tim Gray	Director, Wildlands League (NGO)	Environmental
19 November 1996	Ms Lois Dellert	PhD candidate in Forest Policy, University of Toronto.	Environmental
2 March 1997	Mr Andrew Poynter	Director, A&M wood Specialty Merchant (former FSC Board member)	—
3 March 1997	Mr James Sullivan	Taskforce on the Churches and Corporate Responsibility (and FSC Board Member)	Environmental
9 April 1997	Mr Wally Vrooman	Vice-President, Environment, Avenor Inc.	Forestry
13 May 1997	Dr Fred Gale	Research Associate, Eco-Research Chair, Environmental Law and Policy, University of Victoria	Environmental

Date	Name	Institutional Affiliation	Advocacy Coalition
13 May 1997	Mr Arlin Hackman	Vice-President, WWF Canada	Environmental
13 May 1997	Mr Tony Hamilton	Wildlife Biologist, BC Environment	Environmental
14 May 1997	Dr Hamish Kimmins	Professor of Forest Ecology, University of British Columbia	Forestry
14 May 1997	Dr Gordon Baskerville	Professor of Forest Management, University of British Columbia Campaigners, Indonesian Forum for the Environment, WALHI.	Forestry
14 May 1997	Mr Mike Harcourt *	Former Premier of British Columbia	Forestry
14 May 1997	Mr Mike Apsey	President, Council of Forest Industries (COFI)	Forestry
14 May 1997	Mr Paul Perkins	Vice-President Marketing and Corporate Planning, Weyerhaeuser Canada.	Forestry
15 May 1997	Mr Allan McDonnel *	Executive Director, BC Wild	Environmental
15 May 1997	Ms Johanna den Hertog	Special Advisor, International Relations, Trade and sustainable Development, Ministry of Employment and Investment	Forestry
22 September 1997	Mr Jean-Claude Mercier	Chair, CSA Sustainable Forest Management Technical Committee	Forestry
23 September 1997 & 8 August	Mr Marcelo Levy	FSC Contact Person, Canada	Environmental
23 September 1997	Ms Laura Beckett	FSC BC Standards Working Group	Environmental
27 September 1997	Dr Bill Bourgeois	Vice-President, Policy, Lignum Inc.	Forestry

Note: informal interviews carried out to obtain background information or specific data, in which the full questionnaire was not used, are indicated by an asterisk * beside the respondent's name.

ANNEX 5.2 SUMMARY OF INFORMATION FROM INTERVIEWS

Abbreviations:

FG	: Federal Government
PG	: Provincial Government
PS	: Private sector
NGO	: Non-Governmental Organisations
ACA	: Academics
T	: Total

Category	Number of completed questionnaires	Province
Federal Government	4	
Provincial Government	4	NB 2, BC 2.
Private Sector	8	NB 1, BC 3, Ontario 3, Quebec 1
NGO	10	NB 3, BC 4, Ontario 2, Quebec 1
Academics	6	NB 2, BC 3 Ontario 1
Total:	32	

Table 1. Actors in Forest Policy Domains in Canada

Actors Mentioned	Respondent					
	FG	PG	PS	NGO	ACA	T
Influential Actors						
1. Provincial Governments	4	5	8	6	6	29
2. Forest companies	3	4	6	9	5	27
3. NGOs	3	4	10	3	4	24
4. Forest Industry Associations			2	3	1	6
5. Federal Government				2	1	3
6. Labour Unions				2		2
7. First Nations (i.e., indigenous people)				1	1	2

Note: data from respondents answers to question 13, "Can you list the most important actors (individual or institutional) in forest policy in Canada today?"

Table 2. Problems in Canadian's forests today

Category of forest policy problems	Problems mentioned by respondents	Respondents					
		FG	PG	PS	NGO	ACA	T
Forest tenure arrangements	Volume-based tenures give few incentives to licensees for good forest management	1		2	4	1	8
	Overlapping tenures cause confusion	1		1		1	3
	Licences unfairly allocated to large companies				5	2	7
Where to log: land-use planning	Forest planning does not take other values into account sufficiently	1	1		7	3	12
	Lack of protected areas				8	2	10
	Protected areas' impact on AAC has not been sufficiently considered		2	3			5
	Protected areas not an adequate tool to conserve biodiversity in forest ecosystems with major natural disturbances			2			2
	Too many public consultation processes going on, some of which are "public relations" and do not address the real issues				2		2
How much and when to log: timber management planning	AAC set by existing industrial capacity, not the capacity of the forest to produce timber sustainably	1			5	1	7
	Over-bureaucratic administrative procedures		1	3	1	2	7
	Fall-down of AAC due to depletion of old-growth forests is being underestimated				2	1	3
	Lack of government control of forest companies				2		2
How to log: environmental impacts	Too many clearcuts and other forms of intensive management				4	1	5
	Logging regulations not implemented				3	1	4
	Biodiversity not sufficiently addressed				4	2	6
	Conversion of natural forests to plantations	1			2	1	4
	NGOs keep changing the issues: old growth, biodiversity, landscape ecology etc		1	2			3

Notes: Data in table (and the problems listed in Column 2) come from respondents' answers to Question 1 "What are the main problems facing Canadian forests today?" The numbers in the columns on the right of the table indicate the number of respondents mentioning each problem. Categories of forest policy problems listed in Column 1 are from Ross (1995).

Table 3. Reasons for the Development of Certification in Canada

Reasons mentioned	Respondents					
	FG	PG	PS	NGO	ACA	T
To provide credible information on the forest industry in Canada to the public and customers in Europe	2	3	8	1	1	15
To provide information to forest managers on ways to make improvements in forest management		1	8		2	11
A tool to implement the Canadian C&I for sustainable forest management at the forest level	2	1	7	1	1	12
To encourage better public participation in decision-making by forest companies	1	2	8	1	1	13
A public relations tool by the forest industry				7	1	8

Note: Data comes from respondents' answers to Question 7 "Why are these actors interested in certification now?"

ANNEX 6.1 CHRONOLOGY OF INTERVIEWS IN CANADA

Date	Name	Institutional Affiliation	Advocacy Coalition
6 March 1997	Mr Eric Sollander	Forest Inventory Specialist, National Board of Forestry	Sustainable Forestry
19 April 1997	Mr Sven Sjunesson	Forest Director, Swedish Federation of Forest Owners	Forestry
20 April 1997 and 26 February 1998	Mr Stefan Wirtén	Vice President, Forestry, Swedish Forest Industries Association	Sustainable Forestry
10 May 1997	Dr Lennart Ahlgren	President and CEO, AssiDomän	Sustainable Forestry
23 September 1997	Mr Christer Segerstéen	Deputy Chairman of the Board, Södra	Forestry
16 January 1998	Mr Per Rosenberg	European Forest Officer, WWF International	Sustainable Forestry
10 February 1998	Mr Russel Johnson	Director, Environmental Affairs, IKEA	Sustainable Forestry
23 February 1998	Mr Anders Lindhe	Forest Officer, WWF- Sweden	Sustainable Forestry
24 February 1998	Mr Pär Stenmark (*)	Secretary, FSC Working Group	Sustainable Forestry
24 February 1998	Mr Ake Barklund (*)	Former Director, Nordic Forest Certification Project	—(Not clearly aligned with any coalition)
24 February 1998	Mr Lars. Olof Osterström	Managing Director, Swedish Forestry Association	Sustainable Forestry
25 February 1998	Dr Lars-Eric Liljelund (*)	Chairman, FSC Working Group	Sustainable Forestry
25 February 1998	Mr Börje Drakenberg (*)	Biologist, Skogsbiologerna AB	Sustainable Forestry
25 February 1998	Mr Klas Bengtsson	Forester, Svensk SkogsCertifiering AB	Sustainable Forestry
25 February 1998	Mr Björn Osterlöf (*)	Certified private forest owner	Sustainable Forestry
26 February 1998	Ms Catharina Daggenfelt (*)	Licensing Manager, Swedish Standards Association	—
26 February 1998	Ms Maria Hugosson (*)	Executive Director, Swedish Forests	—
26 February 1998	Mr Gunnar Karlsson; Mr Roger Gerdin	President; Economist, Swedish Wood Industry Worker's Union	Sustainable Forestry
27 February 1998	Mr Jonas Rudberg	Forest campaigner, Swedish Society for Nature Conservation	Sustainable Forestry

Date	Name	Institutional Affiliation	Advocacy Coalition
2 March 1998	Mr Olof Johansson	Senior Ecologist, AssiDomän Forest and Timber	Sustainable Forestry
2 March 1998	Mr Jan-Ake Lundén; Dr Gustaf Aulén	Chief Forester; Forest Ecologist, Södra Forest	Forestry
4 March 1998	Dr Hans Ekelund	Former Director General, National Board of Forestry	—
4 March 1998	Mr Bo Wallin (*); Mr Per Hallerstig (*); Mr Bertil Osterberg (*)	Multiple-use division; Forest Policy; Lawyer, National Board of Forestry	—
4 March 1998	Mr Dag Kihlblom (*)	Former District Forester	Forestry
7 March 1998	Mr Mikael Eliasson	Director, Strategic Planning and Business Development, AssiDomän Forest and Timber	Sustainable Forestry
14 April 1997	Mr Per Osterlöf (*)	Resource Base Manager, Tetra Pak International	—
17 April 1998	Dr Bjorn Hagglund (*)	President and CEO, Stora	Sustainable Forestry
17 April 1998	Mr Ragnar Friberg	Chief Forester, Stora Forest	Sustainable Forestry
17 April 1998	Dr Börje Pettersen	Forest Ecologist, Stora Forest	Sustainable Forestry
17 April 1998	Mr Rolf Lundqvist	Independent Forest Ecologist	Sustainable Forestry
18 April 1998	Dr Per Angelstam	Associate Professor, Grimsö Wildlife Research Station	Sustainable Forestry
20 April 1998	Per Simonsson (*); Per Persson (*); Björn Lyngefelt (*)	Forest Ecologist; Chief Forester; Communications Manager, SCA Forest and Timber	Sustainable Forestry
21 April 1998	Mr Olof T. Johansson	Swedish Sami Federation	Sustainable Forestry
22 April 1998	Mr Per Linder	Doctoral candidate, Swedish Forest and Agriculture University	Sustainable Forestry
23 April 1998	Dr Katerina Eckerberg	Assistant Professor of Political Science, University of Umea	Sustainable Forestry
23 April 1998	Mr Per Larsson	Youth Field Studies Organization	Sustainable Forestry
23 April 1998	Dr Sverker Sorlin (*)	Professor, Environmental Studies, University of Umea	—
24 April 1998	Mr Alf de Ruvo	Vice President, Corporate research and Technology, SCA.	Sustainable Forestry
24 April 1998	Mr Roger Olssen	Editor, Swedish Society for Nature Conservation Magazine	Sustainable Forestry

Note: Informal interviews carried out to obtain background information or specific data, in which the full questionnaire was not used, are indicated by an asterisk (*) by the respondent's name.

ANNEX 6.2 SUMMARY OF INFORMATION FROM INTERVIEWS

Abbreviations:

G	: Government
PS	: Private sector
SFO	: Smallholder Forest Owners
SOC	: Social Interests (Sami and Labour)
NGO	: Non-Governmental Organisations
ACA	: Academics
T	: Total

Category	Number of completed questionnaires
Government	2
Private sector	10
Social Interests (Sami and Labour)	2
Smallholder Forest Owners	3
Non-Governmental Organisations	5
Academics	3
Total	25

Table 1. Actors in the forest policy domain in Sweden

Actors mentioned	Respondents						
	G	PS	SFO	SOC	NGO	ACA	T
Influential Actors							
1. Forest industry	1	3	2	2	4	2	14
2. Private forest owners (smallholders)	1	2		1	4	1	9
3. NGOs	1	2	2		2	1	8
4. National Board of Forestry		1				1	2

Note: Data from respondents answers to Question 14 "Can you list the most important actors (individual or institutional) in forest policy in Sweden today?"

Table 2. Problems in Swedish Forests Today

Category of forest policy problems	Problems mentioned by respondents	Respondents						
		G	PS	SFO	SOC	NGO	ACA	T
Biodiversity conservation	Endangered species	2	5	1		5	3	16
	Lack of reserves, especially for old-growth forests		5		1	5	3	14
	Lack of deciduous trees in managed forests	1	4			4	2	11
	Lack of dead wood in managed forests		3	1		4	3	11
	Use of exotic species in forestry		2			4		6
	Fire suppression		2			2	2	6
	Overpopulation of moose		1				1	2
Environment	Impact of air-borne pollutants on forest soils	1				2	1	4
	Lack of water management in managed forests		1			1	1	3
	Pesticides					1		1
Social issues	Sami reindeer grazing		1	1	1	3	1	7
	Job losses in forestry due to mechanisation			1	2	1	2	6
Economic issues	Lack of alternative employment opportunities in mountain forest areas now forestry is restricted there			1				1
	Fragmented forest ownership	1				1		2
	High wood prices in Sweden encouraging substitution with imports from the Baltic states			1				1
No major problems			3	3				6
Totals		5	27	9	4	33	19	97

Notes: Data in table (and the problems listed in column 2) come from respondents answers to question 1 "What are the main problems facing Swedish forests today?" The numbers in the columns on the right of the table indicate the number of respondents mentioning each problem.

Table 3. Reasons for the Development of Certification in Sweden

Reasons mentioned	Respondents						
	G	PS	SOC	SFO	NGO	ACA	T
Communication and marketing tool for Swedish industry in export markets	1	6		2	1	1	10
To improve forest management in Sweden		3	2		4	2	11
To bridge the gap between the objectives of the Forest Policy and the requirements of the Forestry Act	1				1	1	3

Note: Data comes from respondents' answers to Question 7 "Why are these actors interested in certification now?"

CIFOR

CIFOR was established in 1993 as part of the Consultative Group on International Agricultural Research (CGIAR) in response to global concerns about the social, environmental and economic consequences of forest loss and degradation. CIFOR research produces knowledge and methods needed to improve the well-being of forest-dependent people and to help tropical countries manage their forests wisely for sustained benefits. This research is done in more than two dozen countries, in partnership with numerous partners. Since it was founded, CIFOR has also played a central role in influencing global and national forestry policies.

CGIAR

The Consultative Group on International Agricultural Research (CGIAR), established in 1971, is an informal association of nearly 60 public and private sector donors that support a network of 16 international agricultural research centers. The CGIAR's mission is to contribute to food security and poverty eradication in developing countries through research, partnership, capacity building and policy support. The CGIAR promotes sustainable agricultural development based on environmentally sound management of natural resources.



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