

NATURAL RESOURCE MANAGEMENT POLICY ENVIRONMENT IN MEGHALAYA IMPACTING LIVELIHOOD OF FOREST POOR

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ACRONYMS USED

ADC	Autonomous District Council
CEM	Chief Executive Member
CIFOR	Centre for International Forestry Research
DoNER	Ministry of Development of North Eastern Region
EPA	Entry Point Activities
FDA	Forest Development Agency
IFAD	International Fund for Agricultural Development
JFM	Joint Forest Management
JFMC	Joint Forest Management Committee
NAP	National Afforestation Programme
NaRMG	Natural Resource Management Group
NEC	North Eastern Council
NECORMP	North Eastern Region Community Resource Management Project for Upland Areas
NEHU	North Eastern Hill University
NER	North Eastern Region
NGO	Non-Governmental Organization
NMP	National Mineral Policy
NTFP	Non-Timber Forest Produce
NRM	Natural Resource Management
PRI	Panchayati Raj Institution
R&D	Research and Development
SHG	Self Help Group

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Executive Summary

The goal of the present work is to develop and promote practical policy options to support rural livelihoods. The two specific objectives are: (i) to compile and synthesize the literature on the policies related to various natural resources viz., forestry, agriculture and mineral sectors of Meghalaya, and (ii) to analyze the key natural resource policies to distill evidences and insights on how they facilitate or restrain livelihood improvement of poor from forest.

The impact of three important policies important from livelihood perspective in the present day context on the livelihood of forest poor was evaluated. The three policies/programmes are, Supreme Court interventions, JFM/NAP policy guidelines/resolution, and IFAD programme. Nine villages spread over five districts of Meghalaya were covered under the study. In all the villages the forest dependency was high due to shifting cultivation or timber trade, besides NTFP collection. It was found that impact of Supreme Court intervention was negligible in NAP/IFAD project areas, as well as in the villages where forests are communally owned. The diversification of occupations such as fishery, vegetable cropping, horticulture and intensive agriculture through the latter two programmes had neutralized the income from timber trade. Significant improvement in human, natural, physical, financial and social capitals was observed in these villages. On the other hand, where most forestlands were privately owned and neither IFAD project nor NAP programme was implemented, particularly in Khasi Hills, the forest land owners changed to limestone miners and charcoal makers, defeating the very objective of Supreme Court intervention aimed at forest conservation and providing sustainable livelihood to forest dependent poor. In general, total household income and employment reduced by 10% following the judicial intervention, where there was no NAP/IFAD programme. In Garo Hills, the Supreme Court intervention resulted in enhanced agriculture and horticulture activities. Overall, the Supreme Court intervention resulted in reduced human capital, social capital and financial capital.

The study provides a clear understanding of the existing natural resources and land use policies and their linkages with the poor people's livelihood priorities and strategies in Meghalaya. Most NRM policies, which are being implemented in Meghalaya lack livelihood focus. Appropriate provisions need to be introduced in conservation and development policies and projects so that synergies can be established between livelihoods and conservation, and trade-offs between the two can be reduced. The potential areas of interventions in policy process have been identified to effect improvements in both policy development and implementation processes and livelihood impacts. Natural resources for which specific policies need to be formulated were also identified. Policy-specific issues and amendments have been identified for effecting NRM policy changes.

Chapter 1

INTRODUCTION

Background of the study state

Meghalaya was carved out of Assam as an autonomous district on April 2, 1970. It was declared a full-fledged state of the Indian Union on January 21, 1972. The state of Meghalaya comprises Khasi, Garo and Jaintia hills. The state has a 496 km long international boundary with Bangladesh in the south and west. The state of Assam surrounds the state in the north and east. The eastern part is bounded by the Karbi Hills, which is a continuation of the Meghalaya plateau. On all other sides of the state lies an extensive plain land drained by the mighty Brahmaputra (in the north and west) and the Surma and its tributaries (in the south).

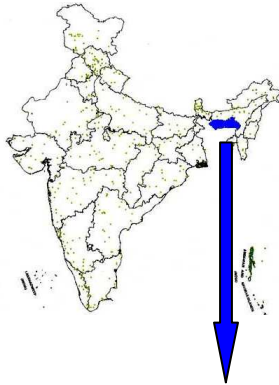


Fig 1: Map of Meghalaya showing different districts.



Biophysical profile

Meghalaya state with a geographical area of 22,429 sq km, is situated in northeast India. It lies between 25°02' and 26°07'N and 89°49' and 92°50' E. The elevation ranges from 60 m to 1950 m asl. The climate is monsoonic with distinct warm-wet and cold-dry periods. The period between May and October is wet. The dry period extends from November to February. The western and southern parts of the state are warmer than the central upland where mean minimum temperature stands at 2°C. Average maximum and minimum temperatures and annual rainfall in the state varies from 5°C to 32°C, and 4000 mm to 11436 mm, respectively. Cherrapunjee and Mawsynram, located in the southern part, are the highest rainfall spots of the world. The soils of Meghalaya are largely lateritic. In the central plateau, the soil is predominantly red and in the northern border areas there are typical upland loam and old and new alluvial soils. The southern parts have sandy gravelly and clayey soils. In general, soils are highly leached, acidic and deficient in phosphorus and potash contents.

Demographic profile

According to 2001 census, the population of the state is 2,306, 069 with a density of 103 persons per square km. The scheduled tribe populations (mainly belonging to Khasi, Jaintia and Garo tribes) constitute 85.53% of the total population. The Garos inhabit western Meghalaya, the Khasis central Meghalaya and the Jaintias eastern Meghalaya. In the interior of the state (excluding the urban populations), the tribal population percentage increases to 97.3% in Garo hills, 77.4% in the Khasi hills and 95.1% in the Jaintia hills. The decennial growth rate (1991-2001) of the tribal elements in the population has been 29.40%. Region wise, it was 24.50% in the Garo hills; 29.50% in the Khasi hills and 36.50% in the Jaintia hills. The literacy rate is 63.31%.

Governance Structure

Districts and Headquarters

The state of Meghalaya has been divided into 7 districts (Fig. 1). These are: East Khasi Hills, West Khasi Hills, East Garo Hills, West Garo Hills, South Garo Hills, Ri Bhoi, and Jaintia Hills. There are 8 subdivisions (other than the district headquarters) and the districts are divided into a total of 39 Community Development (CD) blocks. The total number of villages in Meghalaya is 5780.

Autonomous District Councils

The District Councils are constituted by the members (Member of District Council) representing the District Council constituencies who are elected to office through a regular election like the members of the Legislative Assembly. The leader of the party which gets maximum representation in the District Council is appointed by the Governor of Meghalaya as the Chief Executive Member (CEM.) of the District Council. On the advice of the CEM., some members are appointed by the Governor as the Executive Member who along with the CEM. constitute the Executive Committee of the District Council and exercise their executive powers. The ADCs have executive as well as judiciary power in relation to land disputes and social conflicts.

Economic base

Agriculture is the main occupation of the people of Meghalaya. The Garos practice 'jhum' cultivation. They are also good fishermen but indifferent to hunting. The Garos residing adjacent to Goalpara district of Assam also practice settled cultivation. The Hajongs however, do not practice 'shifting' cultivation. The Khasi have four main types of land uses, viz. (1) the forest land for jhum cultivation, (2) wet paddy land, (3) high grass land and (4) homestead land which is situated close to their courtyard. Some of them are engaged in bee-keeping, as labourers who are employed on road and building construction, etc. In addition to the above occupations, educated individuals have taken up teaching, government jobs and private services as their profession. Besides, a very small fraction of the population depends on business of varying nature and size.

Meghalaya has abundant but untapped natural resources, including coal, limestone, kaolin, feldspar, quartz, mica, gypsum, bauxite, and other minerals. Its sillimanite deposits (a source of high-grade ceramic clay) are reported to be the best in the world and account for almost all of India's sillimanite output. Meghalaya has no heavy industries; small-scale industries include cement, plywood, and beverage factories, in addition to a few newly established ferro-alloys factories in Burnihat area.

Important fruits grown here are orange, pineapple, lemon, guava, jackfruit and bananas, while potato, jute, mesta, cotton, arecanut, ginger, turmeric, betel leaf, black pepper and broom grass are the chief commercial crops. In recent years, vegetable productions have also tremendously increased in the areas adjoining Shillong and Nongpoh. Of late, 'Jhum' or the shifting system of cultivation is being replaced with more scientific cultivation methods, bringing land under permanent cultivation.

Diversity of livelihood

There is a diversity of household livelihood strategies due to differential landholding pattern and availability of different opportunities. For instance, livelihood strategy of the people in a village varies with the landownership pattern, i.e. when most village land is communally owned, shifting cultivation and collection of forest products from the forest for sustenance are the main livelihood activities, but when the lands are privately owned, settled agriculture and cash crop cultivation are the main activities. The availability of different opportunities is usually policy driven, which are provided by the government and other donor agencies. Besides, closeness to market, and exposure to skill up-gradation, entrepreneurship development and market information system are some of the other opportunities. The patterns of livelihood dependency on resources vary greatly between Khasi Hills and Garo Hills. In case of marginal land holdings or landlessness (non-availability of permanent agriculture land), which is more prevalent among Garos, there are a variety of complimentary livelihood activities, such as livestock holding, collection of forest products and seasonal migration for labour. However, in case of Khasis, migration for labour is practically absent. Because of the community ownership of land, shifting cultivation is still prevalent form of agriculture among all the tribes of Meghalaya, although there has been a slow transition towards settled cultivation in recent years. Other area-specific livelihood activities of the people include, vegetable cropping, ginger cropping, broomstick cultivation, horticulture, fishery, selling of non-timber forest products such as bay leaf, honey and bamboo shoots, coal and lime stone mining, and small trading.

Rationale and introduction to the study

The absence of a favourable policy environment aiming at the management of natural resources of Meghalaya to address the livelihood issues of the poor has been responsible for not achieving the goal of eliminating poverty through an NRM-based poverty alleviation programme (Barik 2005, Nonbri 2001). Although there are several policies/ legislations/ regulations relating to natural resource management, only a few of these really link livelihood issue with the NRM (Barik 2003). Many of these policies are extremely weak in their implementation front; hence fail to achieve the policy objectives. The weak policy implementation in turn, often is attributed to the absence of an effective policy development process taking into confidence all the stakeholders and adequately passing through a wider consultation and review process. The issues are hardly debated and influences are highly skewed towards the rich and influential sections of the society. The voices of the poor and other weaker sections are not heard. Therefore, the shortcomings in policy development and implementation process need to be identified and interventions are needed to strengthen the livelihood-policy relationship. There is a need to develop natural resource-specific policies, giving strong focus for addressing the livelihood issues of the poor, particularly for those natural resources, which have high potential to address such issues. For instance, in Meghalaya, there is a total vacuum of policies for the development of various NTFPs such as bamboos, canes, broomgrass etc, which have high potential for providing livelihood support to the poor (Darlong and Barik 2005). No attempt has so far been made to analyse the existing policy regimes of Meghalaya to suggest interventions so that the NRM policies address the livelihood issues of the forest poor. Considering the above, the present study was undertaken with the following objectives.

Goal and Objectives

The goal of the work is to develop and promote practical policy options to support rural livelihoods. The present study has following two specific objectives:

- to compile and synthesize the literature on the policies related to various natural resources viz., forestry, agriculture and mineral sectors of Meghalaya.
- to analyze the key natural resource policies to distill evidences and insights on how they facilitate or restrain livelihood improvement of poor from forest.

Some key questions

- What are the key policies and legislations (herein after referred to as policies) related to forest and natural resources use in Meghalaya, which have impacts on livelihoods of people?
- What opportunities and constraints are created by these policies in access, control and development of local enterprises by people to benefit from forests?
- What role local and national institutions and organizations play in the formulations of these policies and what have been differential impacts of these agencies?

- What are the impacts of these policies on development programmes/ projects on livelihoods improvement of poor?

In a nutshell, the study aimed to achieve the followings:

- A clear understanding of the existing natural resources and land use policies and its linkages with the poor people's livelihood priorities and strategies in Meghalaya.
- Identification of the need for intervention in:
 - a) important policy areas or policy linkages previously under-developed particularly in livelihood areas,
 - b) improving policy making processes (such as by increasing opportunities for poor people's views to be heard),
 - c) improving the mechanisms through which policy is implemented,
 - d) strengthening the organizational capacity to effectively implement the policies.
- A deeper insight into policy environment relating to livelihood issues of the forest poor.

Chapter 2

METHODS

Desk review of existing policies and relevant literature

The policies have been compiled and extensive survey of literature for their analysis has been undertaken. The critical review and analysis of these policies were made covering the following aspects:

- Existing policies and legislations related to forests and some other key natural resources such as land, water, agriculture, biodiversity and mineral resources, and land use were compiled.
- The underlying aims and motives behind these policies were analysed.
- The processes through which policies were developed (including all influences) and implemented were discussed following policy process models of Blaikie and Soussan (1999) and Carney *et al.* (1999).
- The extents to which these policies incorporate a livelihood approach and have poverty focus were assessed following Shankland (2000), Mayers and Bass (1999) and Keeley and Scoones (1999).
- The opportunities and constraints that were created by these policies in access, control and development of local enterprises by people to benefit from forests or these natural resources were analyzed (DFID 2001).
- The role of different local, national and international institutions/ organizations in the formulation of these policies were studied and the differential impacts of these agencies on the policy process (development and implementation) were assessed.

Selected case studies to assess the impact of specific NRM policies

Nine villages, two from IFAD project villages and the other seven from non- IFAD project villages representing five districts of Khasi Hills and Garo hills were selected to assess the differential impact of policies on the livelihoods of the poor. The study was conducted through household questionnaire survey and target group interviews. The case study covered the following aspects (Wiggins *et al.* 2004):

- The ways through which these policies impacted household livelihoods .
- An evaluation was carried out the extent to which these policies actually fulfill their aims.
- The impacts of these policies on development programmes/ projects on livelihoods improvement of poor was evaluated.

Field works took place between October, 2006 and February, 2007. NRM policies were recorded by examining official documents, and by interviewing officials in key ministries and agencies at central, regional and district levels. Leaders in the twelve villages surveyed were interviewed regarding community norms for resource management. Two forest policy instrument complexes viz., (i) Forest Conservation Act, 1980 and Supreme Court Regulation on tree felling 1996-2002, (ii) JFM Resolution, 2003 and FDA Guidelines, 2002, one mining policy instrument complex viz., Mineral Policy, 1993 and

Mining Act, 1957 and one agriculture sector policy instrument viz., IFAD Guidelines in villages in three Districts, were evaluated briefly. Although a wide range of policies may affect the livelihood, only those policy instruments, which are explicitly and directly impact the livelihood issues, have been reviewed. The natural resources that fall within the scope of this study include: forests, agricultural lands (settled agricultural fields and jhum fallows), and mineral resources.

To investigate the impact of these different NRM policies on the livelihoods of those living in the forest belt, the following 9 villages from five different districts covering Garo Hills, Khasi Hills and Jaintia Hills were selected (Table 1). These were purposively selected to reflect differing circumstances, mainly different environmental stresses on natural resources. The main livelihoods carried out, awareness of NRM policy and appreciation of its impacts by the local population, were described through means of a participatory rural appraisal. Subsequently household composition and the main occupations of the members were recorded through a census of households in the nine villages.

Table 1: Villages surveyed and sample households studied to assess the impact of selected NRM policy instruments

	Village	District	Policy instrument, impact of which was assessed	Total No. of households	No. of sample households
1	Sadolpara	West Garo Hills	IFAD	105	32
2	Daribokgre	East Garo Hills	IFAD	18	6
3	Rombakgre	West Garo Hills	JFM/FDA	76	25
4	Molmegre	West Garo Hills	Supreme Court Intervention	22	8
5	Indekgre	West Garo Hills	JFM/FDA	28	9
6	Diskiang	West Khasi Hills	IFAD	39	19
7	Mawthoh	West Khasi Hills	Supreme Court Intervention	20	10
8	Lumshnong	Jaintia Hills	Mining Policy and Supreme Court Intervention	250	74
9	Umtngam	Ri-Bhoi	JFM/FDA	150	45
TOTAL				708	228

Making Recommendations

Based on the above 1 and 2, recommendations were suggested.

- The potential areas of interventions in policy process were identified to effect improvements in both policy development and implementation processes and livelihood impacts.
- Natural resources for which specific policies need to be formulated were identified.

Framework of the Report

In the beginning, the report has tracked the origin and evolution of policies on forestry, agriculture and mineral sectors of Meghalaya. The report provides an inventory of policy instruments in these sectors. It then discusses the linkages between the policies and practices, and livelihood issues. At the end, there is an assessment of impact of policies on livelihoods and working of the policies, and where these might be improved to make them more livelihood-oriented.

Chapter 3

POLICY PROCESS

Policy is generally taken as formal government intentions. With increasingly greater role played by the donor and development agencies in the development process, the intentions of these agencies are also now included in the domain of policy. Policy instruments are the means that the government agencies and other physical institutions use to achieve the desired policy. This may include regulations, incentives (taxes and subsidies), and direct investments (research and extension etc.).

The policy development process is the central to any policy studies. In order to understand this process it is required to understand the detailed events, interactions and responses of various actors and stakeholders that took place during the policy formulation. This will require an understanding of:

- the organizational structures relating to policy development and implementation,
- identification of the main actors or policy makers during the process,
- the strategies used by the policy makers,
- the relative influence of various stakeholders/actors,
- the degree and extent of involvement of the communities in the process, and various influences on the policy process.

Identification and analysis of policy development and amendment processes

The initiation of the development of new policy or amendment to the existing policies is made by several stakeholders. It could be the citizen groups (e.g. NGOs, activists, representatives of civil society), village level natural resource management groups (e.g. JFMCs, NaRMGs), traditional village/community level institutions (e.g. Village Councils, Elaka Chiefs), or Panchayati Raj Institutions (PRIs). However, in India most of the policy processes, whether initiation of a new policy or amendments to the existing policies are largely controlled by the government agencies such as the respective Ministries/Departments. Since most natural resources fall under the concurrent list of the Indian Constitution, the responsibility of framing and amending the policies rests with both the national and state governments.

At the national level, Ministry of Environment & Forests exclusively frames policies for forests and wildlife resources, and has a regulatory role for framing policies over other resources related to environment such as mineral, water, agriculture, marine, coastal and land resources. These latter Ministries/Departments frame policies pertaining to their respective resources. While framing these policies the concerned state Departments are invariably consulted and their comments are incorporated before the finalization of the draft. The draft is examined thoroughly by other distantly related Ministries such as Finance, Law, Commerce, Industries, Foreign Affairs, etc. to examine the possible long term inter-sectoral impacts and implications. Then the draft policy is made public and feed back is received within specified time frame. Before it is tabled in both Houses of the Parliament to become an Act/approved policy, the draft is thoroughly discussed, debated and revised in the Cabinet / Parliament for its approval. Finally, the bill becomes an act when it receives the consent of the President. At state level, the

state specific policy frame work is developed and the process more or less involves similar procedures or steps before it is approved by the State Assembly. The final consent to a bill rests with the Head of the State, i.e. the Governor.

In addition to the above, in Northeast India, there are three more tiers of institutions involved in the policy processes. These are:

- (i) Regional Planning Body, i.e., the North Eastern Council (NEC)
- (ii) Autonomous District Councils (ADC)
- (iii) Village Councils/ Traditional Bodies

The North Eastern Council established in early 70s was hitherto responsible for playing advisory role to Government of India in the Ministry of Home Affairs and funding the developmental projects in the region. During the current 10th Five Year Plan period, the scope of NEC has been widened with the inclusion of Sikkim as the eighth State under its jurisdiction and upgrading it into a Regional Planning Body to be working under the Ministry of Development of North Eastern Region (DoNER). With this restructuring the NEC has now assumed the role of a policy maker for the region. For instance, the NEC is actively involved in formulating the bamboo policies of the region under the National Bamboo Mission. In the past, the body has funded several NRM schemes in the region to boost the biodiversity, rattan, bamboo and medicinal plant resources of the region.

Under the Sixth Schedule of the Constitution, there are three Autonomous District Councils in Meghalaya, viz. the Khasi, Jaintia and Garo Hills Autonomous District Councils. The ADCs under the Sixth Schedule have the power to legislate and enact the laws relating to NRM. For the enactment of any act/policy by the ADCs it is mandatory to receive the assent of the Governor. Examples of such policies/acts are:

- United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests) Act, 1958 (enacted by the Khasi Jaintia Hills Autonomous District Council of erstwhile Assam, which has been reorganized as Meghalaya).
- Garo Hills District (Forest) Act, 1958 (enacted by the Garo Hills Autonomous District Council of erstwhile Assam, now reorganized as Meghalaya).

In addition to the above formal government sector policy making processes, in Northeast India, a spectrum of traditional institutions ranging from clan, village to supra-community level organizations such as *Elaka Chiefs* in the forms of *Syimship*, *Doloiship*, *Nokmaship*, *Sirdarship*, etc. in Meghalaya frame rules, regulations and policies to manage the natural resources under their respective domain. Such rules and regulations in most cases are customary in nature and pass down the generation through practices. These policies have not been codified yet, however still very effective and relevant for the NRM, particularly forests and local biodiversity at grassroots level. Such customary regulations are respected and recognized by the modern government agencies in the entire region.

Policy Development Process in India

- **Drafting policies:** A drafting committee is usually constituted by the concerned Ministry/ department of the government. The Committee prepares the preliminary draft of a policy.

- **Review of the draft policy:** The review process in India is elaborate and lengthy. The opinion of all related Ministries including the Law (to examine the legal aspects) is invariably taken in the review process. The comments from the state governments are also sought.
- **Debating the issues, public feed back in writing:** In recent years the policies are debated in the public forum involving as many stakeholders as possible and the relevant points are incorporated. The draft policy is put on the website of the concerned Ministry for wider review and debate.
- **Analytic tools and approaches used for policy development and advocacy:** In general the workshops on identified issues of a policy are organised where advocacy groups and other stakeholders put their views and after intensive debate the views are incorporated, if accepted.
- **Approval of the policy:** Depending upon the type of policy instrument, the approval is given by the concerned Minister/ Cabinet, Head of the Department/ Secretariat, Parliament /Legislative Assembly and President / Governor.
- **Effectiveness of policy monitoring and evaluation:** No concrete mechanism to this effect is in place. Although policy review, monitoring & evaluation do take place, it is rather adhoc and often informal.
- **Average time frame for a new policy or amendment of existing policy to be adopted:** The time frame for adopting a new policy is generally need-based. The amendments to an existing policy though need based takes much less time in comparison to a new policy. For instance, one of the most important NRM policies, viz., the National Forest Policy, 1894 was revised and new policies were adopted in 1952 and subsequently in 1988. The first amendment to the Wildlife Protection Act, 1972 was made in the year 1991, and the second amendment in 2002.

Issues in policy process

Two issues during policy formulation process are primarily responsible for the failure in effective policy implementation in India in general, and in north-east India in particular.

Lack of community involvement in policy process

In spite of the efforts by the policy making organizations in *recent* years, the policy contents and objectives do not reach the common man. Therefore, many issues primarily concerning a common man e.g. livelihood related issues, do not get reflected in these policies. There is a need to provide more opportunities to poor so that poor people's views are heard during policy process. The participation of communities at formulation level will also ensure the smooth policy implementation.

Skewed influence of various stakeholders/actors

The policy making process in India is not free from various influences. Most policies are strongly influenced by the rich, powerful and advantageous stakeholders, putting the common man in a more disadvantageous position. The anomaly needs to be eliminated during policy formulation stage taking appropriate corrective measures.

Chapter 4

NRM POLICIES AND POLICY INSTRUMENTS

Forest is the primary livelihood resource for most rural population of Meghalaya. Rainfed settled agricultural land, which is available in certain areas, forms the second most important primary livelihood resource for most farmers. Some farmers still practice shifting cultivation in Meghalaya. In certain areas of Meghalaya, mining of mineral resources such as coal and lime stone is the primary livelihood option. Hence, the policies and policy instruments related to these three important natural resources viz., forest, agriculture, and mineral resources have been described in this chapter. The policies and policy instruments for the management of natural resources of Meghalaya are formulated and implemented at three levels, viz., at national level, at state level and at autonomous district council level. Since most of the natural resources are listed either under the concurrent list or state list of the Indian Constitution, the responsibility of policy making therefore lies with both the state and national governments. Besides, at local level, the Autonomous District Councils have the responsibility to formulate policies for the management of natural resources within their respective areas.

National Policies and Policy instruments impacting NRM sector in Meghalaya

- Supreme Court Orders, 1996-2002
- The Scheduled Tribes and other traditional forest dwellers (Recognition of forest rights) Act, 2006
- National Forest Policy, 1854, 1952 and 1988
- North East Forest Policy, 2002 (Draft)
- Project Tiger Guidelines
- National Biodiversity Strategy and Action Plan, 2002
- Joint Forest Management (JFM) 1990 and Forest Development Agency (FDA) Guidelines, 2002
- Wildlife (Protection) Act, 1972 and amendments, 1991
- Forest (Conservation) Act, 1980
- Watershed Development Project for Shifting Cultivation Area
- Soil Conservation for Enhancing the Productivity of Degraded lands in the Catchments of Rivervalley Projects and Flood prone river
- National Watershed Development Project for Rainfed Area
- National Mining Policy, 2003
- Mines and Mineral Act, 1957
- Mines and Minerals (Regulation and Development) Amendment Act, 1994.
- Biodiversity Act, 2002
- Biodiversity Rules, 2004
- Indian Constitutional provision for NRM
- The Cattle Trespass Act, 1871 (1 of 1871)
- The Elephant Preservation Act, 1879 (VI of 1879)
- Indian Fisheries Act 1897
- Livestock Importation Act, 1898
- Wild Birds and Animals Protection Act, 1912
- Prevention of Cruelty to Animals Act, 1960
- Prevention of Cruelty to Animals Rule 1960
- Prevention of Cruelty (capture of animals) Rules 1972
- The Wildlife (Transaction and Taxidermy) Rules, 1973
- The Wildlife (Stock declaration) central Rules, 1973
- The Wildlife (Protection) Licensing (additional matters for consideration) Rules, 1983
- Transport of Animals Rules, 1978
- The Prevention of Cruelty to Animals (Registration of Cattle Premises) Rules, 1978

NATIONAL POLICIES

Forest (Conservation) Act, 1980

The Forest (Conservation) Act 1980 has three major objectives, viz., check deforestation, check/rationalize diversion of forestland for non-forest purpose, and compensatory afforestation in lieu of forestland diverted. It can be said that the Forest (Conservation) Act 1980, therefore, provides certain amount of legal protection to forests. In the process, it helps in protecting the existing forest-based livelihood of the forest-dependents. However, the act is totally silent about creating alternate livelihood opportunities for the forest-dependents when forest areas are diverted for non-forestry purpose. Furthermore, under the compensatory afforestation component, the act can provide provisions for species which would be useful for livelihood earning.

Wildlife (Protection) Act, 1972 and amendments, 1991

Another central act in the form of the Wildlife (Protection) Act, 1972 was a step towards further strengthening of conservation of fauna and flora. The 1991 Amendments of the Act included the word 'plants' along with protection of wild 'animals' and 'birds'. Under Section 17, the collection, cultivation, dealing, etc of 'specified plants' without license is banned. In fact, the act completely lacks any livelihood orientation. Rather the act has been a major hurdle for forest-based livelihood earning as it completely prohibits any form of product extraction from the protected areas (National Parks and Wild Life sanctuaries). It also displaces people from the Protected Areas completely dislocating the forest-based livelihood systems hitherto followed.

Project Tiger Guidelines

Project Tiger has been under implementation in India since 1973. The Tiger Reserves are constituted and operated on a '*core-buffer strategy*'. The core area is kept free of biotic disturbances and forestry operations, where collection of minor forest produce, grazing, human disturbances are not allowed. However, the buffer zone is managed as a '*multiple use area*' with twin objectives of providing habitat supplement to the spill over population of wild animals from the core conservation unit, and to provide site-specific eco-developmental inputs to surrounding villages for relieving the impact on the core. No relocation is visualized in the buffer zone, and forestry operations, NTFP collections and other rights and concessions to the local communities are permitted in a regulated manner. It implies that Project Tiger has too little provisions for addressing the issues of livelihood even in buffer areas. Similarly, Project Elephant too provides little space for livelihood development in the Project Elephant areas.

Autonomous District Council Policies and Policy instruments impacting NRM sector in Meghalaya

- The Garo Hills District (Jhum) Regulation, 1954
- The Garo Hills District (Forest) Act, 1958
- The United Khasi & Jaintia Hills Autonomous District (Management and Control of Forest) Act, 1958.
- United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests) Rules, 1960.
- United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests, Rates of Royalty) Rules, 1959.
- Khasi Hills Autonomous District (Management and Control of Forests, Revised

State Policies and Policy instruments impacting NRM sector in Meghalaya

- Meghalaya Forest Regulation (Application and Amendment) Act, 1973
- The Garo Hills Regulation, 1882 (Regulation 1 of 1882)
- Meghalaya Forest Regulation (Application and Amendment) Act, 1973
- Meghalaya Forest (Removal of Timber) Regulation Act, 1981
- Meghalaya Tree Preservation Act, 1976
- Meghalaya Forest (Removal of Timber) (Regulation) Rules, 1982
- Meghalaya Forest Authority Act, 1991
- Meghalaya Protection of Catchment Areas Act, 1988
- AWIL Fees Act, 1960
- The Bengal Cruelty to Animal Act, 1869
- The Meghalaya Wild Animal and Birds Protection Act, 1971 (Act 9 of 1971)

Joint Forest Management (JFM) 1990 and Forest Development Agency (FDA)

The Ministry of Environment & Forests, Government of India, in June 1990, issued a circular to all the Forest Departments of States and Union Territories for the *revival, restoration and development of degraded forests* along with the participation of the people, called the Joint Forest Management (JFM). A number of states followed the suggestions of the JFM circular, and issued enabling notifications or resolutions for the initiation of the JFM in the respective states, though the nature of the JFM modalities and arrangement varies from state to state. One of the major achievements of JFM has been focus on regeneration of NTFPs in most degraded forest areas of rural communities, besides extension of JFM to good forest areas with sharper focus on activities concentrated on NTFPs. JFM is now the sole strategy adopted under National Afforestation Programme being implemented through Forest Development Agencies (FDAs). The NAP by far may be considered as the most important programme of Government of India, where the livelihood issues of the forest fringe villagers are taken care of through a series of activities including the Entry Point Activities (EPAs) component.

National Biodiversity Strategy and Action Plan

The Draft National Biodiversity Strategy and Action Plan – India has clearly indicated the initiatives, strategies and actions required on wild biodiversity, domesticated biodiversity and land/waterscape or eco-regional approach to planning and natural resource governance, including the links between wild and domesticated biodiversity. The strategy and action plan has also emphasized the need of development of biodiversity-based sustainable livelihood systems. A few such programmes were also worked out as model projects.

Under the NBSAP process, each State Government and Ecoregion also brought out their respective Draft Biodiversity Strategy and Action Plans, where such state/region-

specific programmes were worked out. The Biodiversity Strategy and Action Plan also covered eleven sub-themes on NRM and biodiversity, viz., (1) Understanding and information, (2) In-situ conservation, (3) Ex-situ conservation, (4) Sustainable use, (5) Equitable access, use and sharing of benefits, (6) Capacity of actors in each sector (education, awareness and training), (7) Inter-sectoral co-ordination and integration, (8) Policy and legal measures, (9) Financial measures, (10) Technology and (11) International fora.

North - East Forest Policy, 2002 (Draft)

In pursuance of the recommendations of Shukla Commission which was set up by the Planning Commission to examine the backlog in basic minimum services and gaps in infrastructure sectors for the development in NER, the North East Forest Policy Committee was constituted by the Government of India in the Ministry of Environment & Forests in 1998 to suggest a suitable Forest Policy for the NER within the framework of the National Forest Policy, 1988. Some of the draft modifications recommended, amongst others, include encouragement of forest-based livelihood opportunities to benefit the region and the local communities.

Indian Constitutional Provision for NRM

The Constitution of India was adopted on the 26th November 1949. Social, economic and political justice together with equality of status and of opportunity is among the objectives enlisted in the Preamble to the Constitution. It may be inferred that these objectives are relevant to the overall conservation of natural resources, from the point of view of the equitable sharing of such resources.

Article 48A of the Constitution is one of the Directive Principle of State Policy and states that *The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.* Furthermore, Article 51A deals with the fundamental duties of citizens, which includes a citizen's duty to value and preserve the rich heritage of our composite culture and *to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.* Both these Articles have direct bearing on the NRM.

National Forest Policy

Forestry in India has a long history of organised administration since 1860s. Since then, India has enacted a number of Union laws on forests having direct and indirect relevance to the livelihoods of the millions of forest-dependents. The first ever forest legislation came into existence in 1865, when the Indian Forest Act was enacted for the first time. A more comprehensive Indian Forest Act later replaced it in 1927. This Act is meant to consolidate the laws relating to forest produce, the transit thereof and the duty leviable thereon. The Act has been adopted by most of the States in India. The Indian Forest Act 1927 empowers state governments to regulate the extraction and transit of forest produce by requiring issue of passes, payment of fees and establishment of depots and check posts to regulate export of forest products outside the area.

The first National Forest Policy was enunciated in 1894. The policy at that time recognised four categories of forests, viz., (a) Forests, the preservation of which is essential on climatic or physical grounds, (b) Forests, which afford a supply of valuable

timbers for commercial purposes, (c) Minor Forests and (d) Pasture lands. The third category of forests was primarily meant for fuel and fodder needs of the local communities, which stated “*objective should be to supply the produce of the forests to the greatest advantage and convenience of the people*”. The policy thus has some livelihood orientation, although to a limited extent.

The National Forest Policy of 1894 was revised in 1952. In this policy revision, the private forests (and its products) were brought under the purview of the government. It states that the owner of private forests should in the first instance be given an opportunity to manage their forests in accordance with an approved working plan, failing which the management of such forests should be made to rest with government by due processes of law. The NFP 1952 recognised forests under four categories, viz., protected forests, national forests, village forests, and private forests and tree lands.

The forests under the National Forest Policy 1952, however, continued to be viewed as a source of revenue. Large scale deforestation and diversion of forests for non-forest uses finally led to the formulation of a new Forest Policy in 1988 with the principal objectives of securing environmental stability and maintenance of ecological balance. The NFP 1988 enunciates nine basic objectives. One of these key objectives having direct significance on livelihood of the forest-dependents states “*Conserving the natural heritage of the country by preserving the remaining natural forests with the vast variety of flora and fauna, which represent the remarkable biological diversity and genetic resources of the country, and also meeting the requirements of fuelwood, fodder, minor forest produce and small timber of the rural and tribal populations*”.

The revised policy also recognised certain rights, privileges and concessions extended to the tribals, forest dwellers and local communities but in conformity with the carrying capacity of forests. This policy also recognizes the need to take care of the livelihood concerns of the people residing near forests and emphasizes that they are the first charge of the forest products.

Supreme Court Orders

The Judiciary in India has been playing very proactive role on matters of NRM, particularly since the mid-90s with the famous NRM (forest) related case, popularly known as *Godavarman Case*. Since 1995-96, the Supreme Court of India has passed a series of orders and directions on matters of forest management in North East India, which also has far reaching implications on the livelihoods of the millions of forest dependent populations. Some of the salient features of these orders include:

- All forests are to be worked out according to approved Working Plan and/or Working Schemes.
- Constitution of Expert Committee for fixing of timber prices.
- Wood based industries to be set up only in approved industrial estates. 5 years moratorium for establishment of new wood-based industries.
- Ecologically fragile areas to be identified for the purpose of conservation.
- Restrictions and severe regulations on the transportation of timber from N.E. India to outside the region.

Although, the Supreme Court interventions are primarily focused on timber (i.e. trees) and related issues, the orders have serious implications on the livelihood issues. Unfortunately, the orders were silent in providing alternate livelihoods to the affected populations, particularly the private forest owners and labourers engaged in timber related activities.

Biodiversity Act, 2002 and Rules, 2004

The Biodiversity Act 2002 clearly focuses on management of natural resources / biological wealth with community participation through bottom-up approach. The main intent of the legislation is to protect the country's rich biodiversity and associated knowledge against their use by foreign individuals and organizations without sharing the benefits arising out of such use, and check biopiracy. The Act provides scope for building up alliances and mechanisms for inter-agencies cooperation, inter-district relations, trans-boundary issues and eco-development. The Act provides for setting up of a National Biodiversity Authority (NBA), State Biodiversity Boards (SBBs) and Biodiversity Management Committees (BMCs) in local bodies. NBA and SBBs are required to consult BMCs in decisions relating to use of biological resources and related knowledge within their jurisdiction and BMCs are to promote conservation, sustainable use and documentation of biodiversity. The mandates under this Act have implications on the people's livelihood which is based on biodiversity. The BMCs being locally constituted, can actually impact the local livelihood within the mandates of the Biodiversity Act.

Medicinal Plants Guidelines

Medicinal plants, a very important component of NTFP, and have vast potential for generating alternate livelihood opportunities in the state, have been identified as one the thrust areas by the Government of India in the Ministry of Environment & Forests. The existing programmes include activities for conservation of medicinal plants found in the wild, particularly in the reserved forests and protected areas and also cultivation of medicinal plants in the degraded forests areas. The Department of Indian Systems of Medicine & Homeopathy under the Ministry of Health has set up the National Medicinal Plant Board (NMPB) in order to promote conservation and cultivation medicinal plants and value additions for economic improvement and also promotion of health. The Board encourages cultivation of medicinal plants in community lands and other non-forest areas for the benefit of the communities. The National Medicinal Plant Board has been established to ensure availability of medicinal plants in the country and to coordinate all matters relating to their development and sustainable use. It may be mentioned here that the Board has specially identified 32 species of medicinal plants for overall promotion and development in the country.

Mineral Policy 1993 and Mining Act, 1957

Some of the basic objectives of the NMP 1993 are "to minimize adverse effects of mineral development on environment and ecology through appropriate protective measures and to ensure conduct of mining operations with due regard to safety and health of all concerned". The Policy makes it clear that conservation of minerals is to be interpreted to mean "improvement in mining methods, recovery of associated minerals,

reduction in the requirements of mineral per unit of material output”, etc., and not an abstinence from consumption which is described as a restrictive interpretation of conservation. Since many of the rich minerals are located in forest-rich land inhabited by the native and rural communities, it implies that the livelihood base located in these areas would have adequate attention while minerals are mined and such mined out areas are ecologically restored through plantation/afforestation. However, the policy does not explicitly address the livelihood issues of the affected communities.

The Scheduled Tribes and other traditional forest dwellers (Recognition of forest rights) Act, 2006

The ST and other traditional forest dwellers act, 2006 (Act No. 2 of 2007) recognizes and vests the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded. The Act also provides a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land.

Section 4 (2) (d) of the Act provides the best example, how a policy instrument can be made livelihood oriented. This section deals with the measures to be taken by the authorities in order to implement Wildlife (Protection) Act, 1972 (53 of 1972). It says, “*a resettlement or alternative package has been prepared and communicated that provides a secure livelihood for the affected individuals and communities and fulfils the requirements of such affected individuals and communities given in the relevant laws and the policy of the central government*”.

North Eastern Region Community Resource Management Project for Upland Areas [NERCORMP] (IFAD & Gol assisted livelihood project)

The NERCORMP is a joint initiative of the Government of India and the IFAD, a specialized Agency of the United Nations headquartered in Rome. The North-Eastern Council, Ministry of Development of the North-Eastern region (DONER) represents the Govt. of India and the United Nations Office for Project Services (UNOPS) is the cooperating institution. Started in 1999, the project has been able to achieve its objectives to a great extent. The objective of the project was to improve the livelihood of vulnerable groups in a sustainable manner through improved management of their resource base in a way that contributes to protecting and restoring the environment. The project has two broad focus areas, viz. (a) Social mobilization, organization and capacity building to tap and realize great potentials of the communities employing traditional value systems, and (b) Intervene with economic and social activities through Income Generating Activities to achieve economic transformation. The project has been successfully implemented in 860 villages covering 39,161 households. The project activities provide important clues for adoption of appropriate policy in natural resource management in three states of north-east India including Meghalaya.

STATE LEVEL POLICY INSTRUMENTS

Meghalaya Forest Regulation (Application and Amendment) Act, 1973

The provisions of *Assam Forest Regulation, 1891* was extended to the state of Meghalaya with certain modifications and renamed as *Meghalaya Forest Regulation (Application and Amendment) Act, 1973*. Most of the forests in Meghalaya is owned by the private individuals and controlled by the three District Councils, viz., Garo/Khasi/Jaintia Hills District Councils. The act is silent on livelihood issues of the forest dwellers or forest-fringe dwellers.

Garo Hills Regulation, 1882

The Garo Hills Regulation enacted in 1882, applicable in Garo Hills District, prohibits non-natives from collecting or removing wood or jungle products without license. There are two types of permits, viz., trade permit and *Gurkati* permit. While 'trade permits' are for removal of forest produce where royalties are charged at a prescribed rates, the *Gurkati* permits are essentially for bonafide use /consumption of the local people for removal of thatching grass, bamboos, canes, poles etc. in such quantity as can be carried by the holder on his person. Thus, this old Regulation did take care of livelihood concerns of the local tribal populations.

DISTRICT COUNCIL LEVEL POLICY INSTRUMENTS

Khasi Hills, Jaintia Hills and Garo Hills Autonomous District Council Acts

In the Khasi and Jaintia Hills Districts of Meghalaya, the *United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests) Act, 1958* regulates the management and control of forests in different classes of forests, viz., community forests, sacred forests, etc. The Act also prohibits removal of any forest produce for the purpose of trade from protected forests, *raid* forests, green blocks, Unclassed forests, council reserved forests without permission of competent authority. The Rules framed under this Act known as the *United Khasi & Jaintia Hills Autonomous District (Management and Control of Forests) Rules, 1960* provides elaborate procedure for removal and transit of forest produce from all categories of forests under the control and management of the District Councils, which may be either trade permit or home consumption permit. The local residents or communities are entitled to collect the non-timber forest products for domestic purposes, particularly from forest areas, which are under the ownership of the communities or clans. The Garo Hills Autonomous District Council Act, 1958 has also similar provisions applicable to Garo Hills. Although there has been some concerns for addressing the livelihood issues in these acts, both these important acts have ample scope to specifically mention and implement sustainable forest management and livelihood linkages.

IDENTIFICATION OF AREAS AND KEY ISSUES FOR POLICY INTERVENTION IN MEGHALAYA

- Given the rich forest conditions of Meghalaya, timber and its trade have dominated the forest product scenario in the region for centuries. In spite of rich

diversity of NTFPs and considerable dependence of forest fringe dwellers on them, till date NTFPs remained a neglected forest product in the region. In order to make forest product-based livelihood a reality, NTFP focused policy is needed (e.g. State Bamboo Policy, State Cane Policy, and State Medicinal and Aromatic Plant policy). The contribution of the NTFPs to the state's economy has been undermined and we do not have even a comprehensive study to quantify or to estimate it. NTFP-specific studies are needed.

- Technology for value addition in respect of many of the indigenous NTFPs is not available to make it commercially viable and thus, helping in income generation and providing employment to the forest dependents and rural poor. In spite of the efforts of governments, the technologies available for the value addition of a host of NTFPs such as bamboos, canes and wild fruits remained inaccessible/ beyond the reach of the local entrepreneurs because of high cost, non-availability of finances, lack of technical expertise and remoteness of the region.
- Poor entrepreneurship skill of the local population is another hurdle for developing forest product-based industries in the region. Existing traditional skills require upgradation in product designs and quality control as per national/ international demands and standards. Poor accessibility to the national domestic and international market restricts the commercialization of forest products.
- Certain NTFP commodities such as Broomgrass (*Thysanolaena maxima*) and bayleaf (*Cinamomum tamala*) in Meghalaya need government intervention to protect the interest of the poor and reduce the profit margin of the traders and middlemen. However, while developing the appropriate intervention, it may be noted that nationalization of the commodities is not an answer to it. Such nationalization experiments have miserably failed in the rest of the country.
- Considering the richness of medicinal plants in Meghalaya, many of which are not available elsewhere, these products need special attention of policy makers. High value medicinal plants available in high altitude areas need specific policy and regulation for their development, value additions and marketing.
- Review of royalty and pricing policy for largely exploited forest products such as Bamboos, Canes and some medicinal plant materials for upward price revision. Pricing policy should benefit the growers or cultivators-collectors.

ANALYSIS OF POLICIES WITH RESPECT TO THEIR CAPACITY TO ADDRESS LIVELIHOOD CONCERNS

If managed effectively and with a favourable policy environment, forest products are the most appropriate commodities to address the twin objective of poverty and equity. Although in JFM guidelines the issues of poverty, equity, sustainability and gender concerns have been addressed, the ground experiences and achievements in these aspects are still far from desired level and goals. The policies need to be more focused, objective and specific in order to address these issues. On the other hand, respective state governments must address these issues with equal seriousness and with urgent pace. Constraints to achieving desired level seems to be lack of finance to carry forward

the numerous projects and schemes together with lack of trained and dedicated human resources to implement the schemes and slow pace of awareness among the rural population and their lack of absorbing capacity as per the project objectives.

The institutions responsible for forest product management and development for creating livelihood opportunities must work closely with women, since women in the state are major players in this regard. Women have been the major gatherers of NTFPs. Thus, the policy frame work must give an emphatic view on the involvement of women in planning, implementation, monitoring and review of any activity. Their opinion and active participation is essential to evolve a realistic management objective and approach, which is achievable. In addition to household works, women in Meghalaya perform most of the farming works. If they are given proper field training in cultivation, exploitation and storage of various forest products, these hard-task performing women will be able to enhance their economy as well as can conserve the natural resources through on the farm planting thus reducing the pressure on the natural populations due to wild collections.

In view of the above, the suggested policy framework must facilitate the participation of women and other weaker sections of the society in the management and development of forest-based livelihood development. The guidelines for sustainable regeneration, harvest and equitable distribution of benefits (in case the product is from common property resources) should be a part of the proposed policy. Both the existing policies on NRM, such as National Forest Policy and Joint Forest Management Resolutions fortunately provide ample space and opportunity for the participation of weaker section of the society including the women. The emerging NTFP-specific strategies/missions such as the National Bamboo Mission, North East Bamboo Mission, the Horticultural Mission (one objective being to promote medicinal plants) and also developing bamboo policies such as Tripura Bamboo Policy 2001, Mizoram Bamboo Policy 2002, Nagaland Bamboo Policy 2003 are heavily focused on the objectives of ecological and economic securities of the people of the region with particular reference to the rural communities and the women.

Various existing policies and programmes of the government, such as greening India programme, wasteland development programme, hill area development, *jhum* control programme, etc. are increasingly becoming focused for development and regeneration of various forest products (such as bamboo, broom grass, MAPs, etc.) as alternative livelihood sources and hence these policies and programmes, if implemented effectively, have the potential for addressing rural poverty.

The “Vision NER 2020” is under preparation through active consultative and participatory processes by all the stakeholders including the grassroots communities. One of the focused formulation strategy is “*adoption of mission approach for focused attention in areas like development of bamboo, silk, horticultural produce, medicinal herbs and indigenous medicines*”. Value addition of local produce locally, marketing linkages, up-gradation of relevant skills, access to credit are some of the areas that will be extensively dealt in the context of livelihood development for the forest-dependent populations.

What is important in the preparation of the Vision Document NER 2020 is the paradigm shift in the approaches of preparation of the document. The component of paradigm shift as per the formulation paper is the “meaningful involvement of the various sections of society in the entire planning process, right from formulation of plans through their implementation to monitoring and evaluation” so that the process ensures “restoration of the rightful status of the community in development and creating congenial conditions for the march to a brighter future”. The vision document preparation takes into account “the heightened consciousness of the people of NER, their aspirations, needs and sensitivities and that touches all sectors of the economy and the vast resource potential of the region”.

Table 2. Key institutions and organisations involved in NRM in Meghalaya

Categories	Ministries/Departments/Organisations
Central Government	Planning Commission, New Delhi Ministry of Environment & Forests, New Delhi Ministry of Agriculture, New Delhi Ministry of Rural Development, New Delhi National Medicinal Plant Board, New Delhi National Biodiversity Authority, Chennai Ministry of Mines, New Delhi
State Government	State Forest Department Autonomous District Councils State Forest Development Corporation Forest Development Agency State Medicinal Plant Board State Agriculture Department State Mining Department State Soil conservation Department
Autonomous District Councils	Khasi Hills Autonomous District Council Jaintia Hills Autonomous District Council Garos Hills Autonomous District Council
Central R&D Institutions / Organisations	Forest Research Institute, Dehra Dun Rain Forest Research Institute, Jorhat
Central organisation specific to NER	North Eastern Council, Shillong
Community Institutions	Traditional Tribal Institutions such as <i>Syiemships</i> and <i>Sirdarships</i> among the Khasis, <i>Akhing Nokma</i> among the Garos, <i>Dolois</i> among the Jaintias and Village Councils in all the tribal communities

Chapter 5

ANALYSIS OF KEY NRM POLICIES IMPACTING LIVELIHOOD OF FOREST-DEPENDENTS

Because of the diversity in livelihood strategies, any policy measure by the government or any other agency related to natural resources is likely to affect the livelihood of the people of the state. Although there could be many policy instruments which have direct or indirect impact on the livelihood of the people, the following seven policy instruments have far reaching consequences on the people's livelihood and therefore, have been critically analyzed in this chapter:

(i) Forestry sector

- Supreme Court intervention in 1996-2002 and Forest Conservation Act, 1980
- Joint Forest Management Resolution, 2003 and NAP Guidelines, 2002

(ii) Mineral Sector

- Mineral Policy, 1993 and Mining Act, 1957 including Mines and Minerals (Regulation and Development) Amendment Act, 1994.

(iii) Agricultural Sector

- IFAD Guidelines and experiment (for North Eastern Region Community Resource Management Project for Upland Areas)

FORESTRY SECTOR

Forest Conservation Act, 1980 and Supreme Court intervention 1996-2002

In the present day context, the most controversial forest policy instrument in Meghalaya is the Forest Conservation Act, 1980, which provides regulatory mechanism that permits only unavoidable use of forest land for various developmental purposes. The Act and Rules and Guidelines made there under embody a framework regulating indiscriminate diversion/use of forests for the developmental need of the people and country, so that development is not constrained but accommodates conservation parameters.

Origin and evolution of policy instruments

Between 1950 and 1980, forest lands were diverted at the rate of 1.50 lakh ha per annum by the State governments and Union Territories administrations. The importance of forests and forest ecosystems from livelihood as well as biodiversity conservation points of view was realized. Hence, the need to regulate their indiscriminate diversion for other purposes was emphasized. Such realization resulted in the formulation and enactment of Forest Conservation Act, 1980 with amendments made in 1988 and Forest Conservation Rules, 2003 with amendments made in 2004. Subsequent to implementation of this Act, the diversion has come down to as low as 0.38 lakh ha per annum. In view of the several controversies surrounding the Act and misconception of the scope of the Act, and realizing the significance of the act relating to the protection

and conservation of forests in the country, the Supreme Court of India in its interim order on 12 December, 1996 clarified the definition of forests and scope of Forest Conservation Act, 1980, which now covers all the forests irrespective of their ownership.

Key Policy Issues and Relationship with Livelihoods

The key policy issues are:

- All types of community forests and private forests are now under the purview of Forest Conservation Act, 1980.
- The working schemes for not less than 5 years period are now required to be prepared for all the private and community forests based on sustained yield principle. It is mandatory to get these approved from the Government of India for working of all these forests. With these steps, the indiscriminate deforestation has now been stopped.
- The forests, whether government, village or private serve the entire community and represent a community resource that meet the need of the millions of the rural people especially the tribal and poor. The wellbeing of forest fringe dwellers is dependent on forests wholly or in part. Deforestation has adverse consequences on people living near the forests. Therefore, the poor people who depend on these forests for their sustenance were benefited out of the Supreme Court intervention, because the existence of the forests is now ensured.
- However, the private forest owners are now brought under regulatory mechanism, curtailing their autonomy, which they feel has affected their livelihoods.

Analysis of policy objectives vis-à-vis livelihood

The main objectives of the Forest Conservation Act, 1980 or the Supreme Court intervention in 1996 were to protect and conserve the forests either by way of regulating their conversion for non-forestry purpose or through imposing a blanket ban on timber felling till a scientific management plan is in place for sustainable harvest. Although livelihood issues were not in the forefront of such policies, the concern for the livelihood of millions of forest poor was inbuilt within the forest conservation objective.

The Forest Conservation Act, 1980 certainly affected the livelihood of these forest poor people in a positive way by drastically restricting the forest conversion, thereby ensuring their sustenance livelihood.

On the other hand, it has gone against the interest of the forest land owning communities, or community elites in case of loosely managed community forests where they were taking advantages of the situation. The principal source of earning from the forest in Meghalaya has been traditionally timber, which has now been regulated by the Supreme Court. The Act clearly bars to take up cash crop plantations in the forest areas thus reducing the cash income of the private forest owner. Therefore, these policies have affected his livelihood in a negative way, at least if one examines with a myopic vision. Although in the long run, even the private forest owner should not be the loser, as argued by the conservationists which the forest owners do not believe!

Till date the Forest Conservation Act has not been effectively extended to community forests and shifting cultivation has not been treated as yet as a non-forestry activity.

However, if strictly implemented in community forest areas and shifting cultivation is treated as a non-forestry activity, the Act would act against the livelihoods of the millions of shifting cultivators. The Tribals Rights Act, 2006 could possibly be a solution to this vexed problem.

Policy Process

(i) Institutional arrangement/mechanism

The Ministry of Environment and Forests, Government of India is directly responsible for the implementation of Forest Conservation Act, 1980. The High Power Committee constituted in each state chaired by the Chief Secretary of the concerned state oversees the implementation of the Supreme Court directives. The provision of severe action against the defaulters has been made.

(ii) Strategies of implementation

The Ministry of Environment and Forests, the nodal agency for implementing both the policy instruments ensures their effective implementation through its North-East Regional Office at Shillong. The High Power Committee is supposed to meet every month to see the policy implementation.

(iii) Decentralisation and local institution

At the State level, a Nodal Officer of the Rank of Conservator of Forests has been designated by the State Forest Department to deal with the matters relating to these policy instruments. There is no officer exclusively responsible for implementing the policies at Autonomous District Council level. The State Nodal Officer is empowered to see all the forest areas, including those under the jurisdiction of the Autonomous District Councils. However, it is desirable to decentralize the activities under these policy instruments to make them more livelihood –oriented. For instance, if it is decentralized, while considering a diversion proposal more attention could be given towards the generation of alternate livelihood for the affected population, which could be a part of the compensatory afforestation package under the policy.

(iv) Institutional capacity to implement policies

The Institutional Capacity to implement both the policy instruments at all the three levels is extremely poor. The Regional Office of the Ministry of Environment and Forests at Shillong is always understaffed. For example, only 2-3 officers have to see the implementation of these policy instruments in eight north-eastern states. The livelihood orientation to conservation effort is also not always appreciated by some of these officers. In the process, the inbuilt component of livelihood in policy objective is seldom met. The Nodal Officer at state level is equally overburden and often lacks deeper understanding of livelihood issues associated with the conservation objectives of the policy instruments. At the Autonomous District Council level, neither there is adequate manpower nor capacity to effectively implement the spirits of these instruments.

(v) Intra and inter sectoral policy links

Both the policy instruments are successful in this regard. Since 1980, the Act has facilitated developmental activities like construction of power projects, irrigation projects, roads, railways, schools, hospitals, rural electrification, telecommunication, drinking

water facilities, mining etc. on forest lands and checked the indiscriminate diversion of pristine forest areas. Through these policies, other sectors have been contributing towards livelihood development of the forest dependents by way of improving social capitals and economic capital through compensatory afforestation package.

Impacts and outcomes for livelihoods

Although direct impact of these policy instruments on the livelihood and poverty is difficult to measure, there has been some positive impact on the livelihood of the forest poor people by drastically restricting the forest conversion, thereby ensuring their sustenance livelihood.

The future perspective

(i) Issues relating to policy instrument

Operational constraints: As discussed above, there has been several operational constraints to implement these instruments which ranges from lack of capacity within the institutions presently involved, to involving more institutions in implementing the policies. Unless the implementation is decentralized and made participatory, the livelihood issues will be pushed behind.

Administration and Financial arrangements: Decentralized implementation process should be adopted. Provision of adequate funding for capacity development of the implementing agency should be made.

Local leadership: Local leadership among the communities should be developed to share the responsibilities. For instance, to prepare the working schemes capacity among the communities needs to be built up. The policies should be implemented with close collaboration with the local communities.

(ii) Wider issues

Technical issues: Technical capabilities among the forest department staff as well as among the communities need to be built up. For instance, while making the working schemes, adoption of GIS technology, provision for NTFP management within the forest area and value addition of selected NTFPs must be incorporated.

Social issues: The objectives of these policy instruments have not been well-understood by the mass, particularly the forest land owning community. The myths about the Supreme Court order and also the Forest Conservation Act have led the people to adopt wrong such steps as burning down the forests for char coal trade or converting the forests into mining areas. They need to be educated about the good intention of the policy instruments.

Equity for beneficiaries: The equity aspect of these policy instruments needs to be highlighted among the people for their acceptance.

Joint Forest Management (JFM) and National Afforestation Programme (NAP)

Origin and evolution of policy instruments

The National Forest Policy, 1988 emphasized that the people living in forest vicinity have the first charge of forest products and benefits. In order to operationalize the concept, the Ministry of Environment and Forests, Government of India issued a circular to all the state governments on 1st June, 1990 to ensure the participation of people in forest regeneration and management and share the benefits with them. As a result, the enabling Joint Forest Management (JFM) resolutions were passed by all the states and JFM became the sole strategy for forest regeneration and management in India during the past one and a half decade. With the adoption of JFM, the livelihood of forest dependents improved significantly, because of getting access rights to NTFPs and other usufructs including a share from the final harvest. The JFM approach got a boost during eighth five year plan period, when the Government of India decided to implement all its plantation schemes through JFM. The Integrated Afforestation and Ecodevelopment Scheme further strengthened the livelihood aspect by incorporating the component of Entry Point Activities, through which people undertook diverse livelihood activities along with village infrastructure to reduce poverty and forest dependence. These concepts were further refined and focused during successive plan periods and in the year 2000 the MoEF started SGVY, the precursor of NAP with a focused objective of poverty alleviation and employment generation in addition to forest regeneration and management. In Meghalaya, JFM was adopted in 2003 and also it implemented NAP in the same year.

Key Policy Issues and Relationship with Livelihoods

Analysis of policy objectives vis-à-vis livelihood

Initially, JFM had a strong focus on forest regeneration and management and the livelihood aspects of the people were some of the fringe benefits. However, since IX plan period, the schemes of Government of India were strongly reoriented towards poverty alleviation and employment generation, thus livelihood became the ultimate objective of JFM initiatives along with forest conservation.

Policy Process

Institutional arrangement/mechanism

The JFM is being implemented through grassroots level organizations known as Joint Forest Management Committees (JFMCs). All the households (often represented both by husband and wife) in a village constitute the General Body of JFMC. The decisions are collectively taken by the JFMC members represented by Executive Committee members and the Member Secretary, a forest official. At the district level, the programme is implemented through Forest Development Agency, a body consisting of the concerned Conservator of Forests as Chairman, representatives from other government departments, JFMCs, Panchayat Raj Institutions/District Council Representatives and concerned Divisional Forest officer as Chief Executive Officer.

Strategies of implementation

The NAP is implemented through a two-tier institutional mechanism, i.e. JFMC at village level and FDA at district/division level. In fact, FDA may be considered as a body representing the federation of JFMCs in that particular division/district. The programme is implemented through a microplan prepared by the villagers and facilitated by the forest officials. The project is administered through decentralized manner, where requirements originate from JFMC level and subsequently approved by the FDA. The JFC members are empowered through capacity development programmes, devolving decision making power concerning the project and ensuring complete autonomy of the JFMCs on deciding the livelihood and other activities under Entry Point Activities (EPA) component of the project. The programme ensures maximum people's participation in the programme and creates substantial employment opportunities through undertaking diverse forestry activities such as plantation of timber, fuelwood, medicinal, multipurpose and fodder species, soil and moisture conservation activities and nursery establishment. The livelihood activities of the people are strongly supported by establishing Self-Help Groups, providing seed money to small entrepreneurs and SHGs for securing bank finance, providing training on diverse livelihood activities, providing linkage with research institutions for technology transfer as well as forward and backward market linkage.

Decentralisation and local institution

The most important factor contributing to the success of NAP is effective working of decentralization mechanism both in institutionalization as well as decision making process. The synchronization of JFMC with traditional village institution is another important aspect that led to success of NAP.

Institutional capacity to implement policies

The JFMCs and Forest Department have been jointly implementing the programme resulting in higher effectiveness of the programme. The institutional capacity both at JFMC and FDA level has been enhanced through several training programmes and currently it is adequate. However, the mechanism has to be inbuilt within the Forest Department to get rid of the ad hocism.

Intra and inter sectoral policy links

Strong inter-departmental linkages have been tried under the NAP. In many areas it has become successful as well. The effort needs to be strengthened, particularly for providing training and support in livelihood diversification activities and undertaking EPAs.

Impacts and outcomes for livelihoods

So far, in Indian forestry sector, NAP has been the only programme that has strongly focused on livelihood issues to alleviate poverty among the forest-dependent populations. Quantitative studies are available to suggest that NAP has been successful in diversifying livelihood activities and reducing poverty in project areas.

The future prospective

Issues relating to policy instrument

Operational constraints

The limited number of forest front line staff often hinders the progress of NAP. There is a major financial constraint to upscale the programme so that all the 1,73,000 forest fringe villages of the country can be covered. The present level of financial support only covers less than 20% of the total requirements.

Administration and Financial arrangements

The administration and financial arrangement including the Evaluation and Monitoring mechanism of the programme have been extremely good. The delay in fund release or diversion of programme fund have been effectively taken care of by releasing the funds under the project directly to FDA and ensuring subsequent transfer to the JFMCs within next 15 days.

Local leadership

The local leadership development has been given maximum thrust through JFMC institution building and management.

Wider issues

Technical issues: Effective NTFP management for better livelihood within the silvicultural systems of forests has not happened as yet. The NTFP species still constitute a minority in the plantation programmes. Value addition and marketing potential of NTFPS for improved livelihood of JFMC members have not been fully realized due to either lack of technology for certain products or slow transfer of technology to JFMC level.

Social issues: Although as per resolution, socially backward populations are entitled to more benefits, in reality it does not happen always because of land tenure system and clan composition of the villages. Appropriate policy amendments are required to address these social issues.

Equity for beneficiaries: Equitable distribution of usufructs and benefits has been ensured under the programme through JFM resolution. At least 33% representation by women has been ensued in decision making bodies, i.e. Executive Committee of JFMC and adequate representation of women in FDA executive body. However, true participation of women in the programme is still to be achieved.

MINERAL SECTOR

Mineral Policy Instruments: Mining Policy 1993 and Mining Act, 1957

Origin and evolution of policy instruments

The state of Meghalaya is rich in mineral resources. The major minerals present in the state are coal, limestone, clay and sillimanite. Besides, ores of iron, uranium, copper, granites, gold etc. are also found in the state. The annual revenue income of the state from these minerals is about Rs. 40 crore. An estimated 100,000 population in the state are dependent on mineral sector for their livelihoods.

The Mines and Minerals (Regulation and Development) Act, 1957 (MMRD Act) lays down the legal framework for the regulation of mines and development of all minerals other than petroleum and natural gas in India. The Government of India has also framed the Mineral Concession Rules, 1960 for regulating grant of prospecting licenses and mining leases in respect of all minerals other than atomic minerals and minor minerals. The state governments were to frame rules for minor minerals. The Mineral Conservation and Development Rules, 1988 was framed by Government of India for conservation and systematic development of minerals. The rules are applicable to all minerals except coal, atomic and minor minerals. The MMRD Act was further amended in 1999 to delegate more power to the state governments and to bring the provisions for grant of mineral concessions at par with major mineral producing countries of the world.

To attract private investment (both domestic and foreign) in mining sector, the National Mineral Policy (NMP) was revised in 1993. Some of the basic objectives of the NMP 1993 are “*to minimize adverse effects of mineral development on environment and ecology through appropriate protective measures and to ensure conduct of mining operations with due regard to safety and health of all concerned*”. The Policy makes it clear that conservation of minerals is to be interpreted to mean “*improvement in mining methods, recovery of associated minerals, reduction in the requirements of mineral per unit of material output*”, etc., and not an abstinence from consumption which is described as a restrictive interpretation of conservation. However, the livelihood issues have never been focus of NMP. Since many of the rich minerals are located in forest-rich land inhabited by the native and rural communities, the mining would lead to the destruction of forest thereby denying many forest-dependent people their forest-based livelihood. Thus, mining operations would encourage more mine labour as primary occupation for those people who were hitherto earning their livelihood from the forest.

Meghalaya has no state policy on minerals or mining. It follows the national mineral and mining policy as well as the acts enacted by Govt of India. However, executive orders pertaining to minor minerals have been issued by the Govt of Meghalaya from time to time. The problems of mining sector in Meghalaya are complicated because of the land tenure system of the state. The Sixth Schedule of the Indian Constitution, which is operational in all the mining areas of the state, empowers people to use the land and resources owned by them. Hence, the regulations and acts framed by the Govt of India are not applicable to these areas when mining is done by concerned land owners individually. About 90% of the mining activities in Meghalaya fall under this category. Although mining work without any regulation does pay handsomely to the land/mine

owners, large number of mine workers remained poor and earned very low wages for their livelihood.

Key Policy Issues and Relationship with Livelihoods

The Article 7.16 of the Mining Policy deals with the livelihood issues of the displaced population. It does not specify the strategies and no Guidelines or Rules have so far been framed to implement these measures.

Impacts and outcomes for livelihoods

Although mining provides immediate livelihood to many poor people, its long-term consequences are both against the environment and social security. Since mining degrades the surrounding environment it impacts the livelihood as well as health of the land – dependent population.

The future prospective

Appropriate regulatory mechanism giving adequate awareness and power to the traditional institutions need to be in place. Sustainable mining has to be practiced giving adequate attention towards environmental conservation and ensuring secured livelihood for the natural resource dependent population. This has to be achieved both through appropriate policy amendments at national level, introduction of new policy measures both at state and district council level and adopting large scale awareness programme among the land/mine owners and the traditional institutions who would have regulatory power to streamline the mining sector of Meghalaya.

AGRICULTURAL SECTOR

Agriculture Policy Instrument: IFAD Guidelines (Appraisal Report)

IFAD's strategy in India is to use its limited resources to develop innovative approaches that are sustainable and replicable, have a catalytic effect and are consistent with government policy towards poverty alleviation, particularly among the most vulnerable groups such as scheduled castes, tribals, landless /small / marginal farmers to enjoy larger benefits from public investments in land improvement with due consideration of environmental preservation alongside agricultural development. NERCORMP does not have any declared policy statement for agriculture. The Appraisal Report, which is the project document vis-à-vis implementation strategies, is being considered as the policy instrument for this purpose, while the objectives and activities are considered as policies.

Origin and evolution of policy instrument

NERCORMP project process, from inception, through formulation and appraisal has been highly participatory in an effort to ensure that the planned project meets the expectations of the potential target group population. The problems and aspirations of communities were sought through detailed socio-economic and production studies, including analysis to indicate the prevalence and dynamics of jhum / shifting cultivation, studies of sacred groves, NTFPs, marketing and processing. The NERCORMP project

preparation process commenced with the inception paper in May 1994, followed by Initial Formulation Report (IFR) in August 1994, Formulation Report (FR) in August 1995, Appraisal and Implementation Planning Mission in November-December 1996. The Appraisal Report was approved in April 1997 and NERCORMP project was declared effective in February 1999.

Key policy issues and relationship with livelihoods

The key policy issues (or objectives) are focused around improvement of livelihoods. The core policy issue or objective is to improve the livelihood of vulnerable groups in a sustainable manner through improved management of their resource base in a way that contributes to protecting and restoring the environment.

Analysis of policy objectives vis-à-vis livelihoods

The core policy issues in the context of livelihoods encompasses other integrated and underlying issues that strengthen the processes of natural resource management including agriculture development vis-à-vis livelihoods. The core policy issues may be disaggregated and summarized as follows:

- Promoting a more sensitive approach to the design and implementation of development interventions;
- Enhancing the capabilities of local communities to manage new technologies and institutions at the village level;
- Increasing incomes (also savings) through the development of more sustainable farming systems and the establishment of non-farm sectors;
- Making people more aware of the need to preserve and regeneration natural resources, particularly land, forests and biodiversity, which are also the pillars for livelihoods;
- Establishing effective and appropriate delivery systems for inputs (credit, extension, etc.) and for the maintenance of assets and resources;
- Increasing the participation of women in local institutions and decision-making processes within the community;
- Enhancing savings capacity and establish the habit of thrift;
- Increasing access to basic services and infrastructure facilities.

Policy processes

Institutional arrangement /mechanism

NERCORMP is supervised by IFAD, UNOPS and Govt of India in the Ministry of Development of North Eastern Region and the North Eastern Council, Shillong. The project activities are governed by a Regional Society with a professional team called Project Support Unit (PSU) based in Shillong. At the district levels [6 districts in all], the project governance is by District Society with professional team called Development Support Team (DST) in each district. At the community or village level, the Natural Resource Management Groups (NaRMGs) and Self Help Groups (SHGs) along with Local non-governmental organizations (NGOs) as partner of the project are part of the institutional arrangements for implementation.

Strategies of implementation

The NaRMGs prepare the Community Resource Management Plan (CRMP) and also implements the policies (activities) at the village level. The preparation and implementation of CRMPs are facilitated by partner NGOs and DSTs, in turn coordinated and supervised by the PSU for the entire project.

Decentralization & local institutions

The project implementation strategies at grassroots level are decentralized through 'bottom-up' planning approaches of the project. The NaRMGs and SHGs are the local institutions, which prepare the Community Resource Management Plan at the village level through participatory planning processes with the involvement of the entire community. Implementation of the activities and financial managements are all done by the NaRMGs as part of the processes of decentralization and strengthening of local institutions. There are also higher order organizations such as NaRMG Associations and SHG Federations, which are local community based institutions with increasing roles of capacity buildings for members, marketing linkages and financial sourcing for increased availability of Microcredits.

Institutional capacity to implement policies

All the key members of the project at PSU and DSTs are professionals with required academic background and professional experiences. Their capacities are further sharpened, focused and reoriented through trainings and other capacity building processes such as exposure visits and experience sharing interactive meets, besides participations in regional/national/local seminars and workshops. The members of NaRMGs and SHGs, and also partner NGOs are regularly exposed through series of capacity building training programmes and processes.

Intra-and inter-sectoral policy links

Within the project, all sectoral objectives and strategies [such as community institution building, village infrastructure development, social sector, gender sector, marketing sector and microcredit/ microfinance sector] are all linked to the achievements of the key policy focused, which is the improvement of livelihoods.

Impacts and outcomes for livelihoods

The impacts and outcome of the project and policy objectives are manifold, particularly with respect to improved livelihoods. Some of these indicators are:

- Increased household incomes and savings by over 100% and above for about 60-80% of households in every project villages.
- Increased area for crop production (increased areas of terraced fields, minor irrigation, horticultural crops and home gardens).
- Increased areas under community forests and community biodiversity conservation along with community based biodiversity with improved resource based as well as rules and regulations for their conservation and exploitation.

- Increased financial flow within the communities both for consumptive and assets creation.

Future perspective

NERCORMP is a pilot project with limited implementation in specific areas of Meghalaya. The key operational constraint is that the project in its present form will end by March 2008 and closes by September 2008. However, as per the recent agreement between World Bank and Government of India (in the Ministry of Development of North Eastern Region), the NERCORMP programmes will be taken over and scaled-up to other parts of the region by the World Bank assisted North Eastern Region Livelihoods Project w.e.f. July 2008. The proposed administrative arrangements would be a three-tier set up with a Regional Society at Ministry of DoNER, State Society chaired by Chief Secretary at State level and District Society chaired by District Collectors. The local grassroots leaderships at the village level will be the NaRMGs and SHGs following the NERCORMP model.

Chapter 6

POLICY IMPACT ON LIVELIHOOD OF FOREST-DEPENDENTS

Livelihoods in Meghalaya are mostly centered on forest and agriculture. The majority of the households have forest-based livelihood. They either collect non-timber forest products or sell timber and bamboo. The second, majority of the populations grow food crops in jhum, particularly in Garo Hills or settled agricultural field for earning their livelihood. Vegetable and horticulture production are the third most common occupation. After forest and farming, the principal occupations are small-scale trading and daily labour. Some households also have tree crops or livestock, but these are rarely the mainstays of their livelihoods. Following Supreme Court's intervention, charcoal making, coal and limestone mining have become the principal occupation of forest owners, particularly in pockets of Khasi Hills and Ri Bhoi districts thus impacting the forests and livelihood of other forest dependents.

The most important point that emerges from the livelihood patterns of people of Meghalaya is that most occupations are based on the use of local natural resources such as land, mineral resources and trees. Almost half the households in the census were engaged in one or more of the four occupations, viz., Charcoal making, Mining, NTFP collection and trade, and Vegetable cropping and horticulture. The first three occupations were identified as vulnerable to NRM policies. Vegetable production and horticulture was by far the most important emerging occupation, following Supreme Court intervention, and encouragement through IFAD/ Agriculture Department intervention and NAP implementation.

During the initial reconnaissance, villagers were asked about their awareness and perceptions of the NRM policies. In all the villages, people were well aware of the existence of policies and regulations.

Although the impacts reported were diverse, the Supreme Court intervention in 1996 by far is the highest impacted policy in NRM sector. Despite all good intentions and much effort to formulate NRM policies most of the policies are not translated into effective action in the field.

Impact of Supreme Court Intervention, FC Act, 1980 and Mining Policies

The impact of Supreme Court intervention, Forest Conservation Act, 1980 and Mineral Policy 1993 and general mining policies on the livelihood of the forest-dependent population has been studied in three villages of Meghalaya viz., Lumshnong in Jaintia Hills district, Molmegre in West Garo Hills district, and Mawthoh in West Khasi Hills district. The villages were purposely selected for assessing the impact of abovementioned policy instruments. The heads of the households were interviewed through a structured questionnaire which comprised of the land use practice, land ownership pattern, livelihood sources, impact of policy intervention on livelihood, involvement in policy making and implementation, output and out come of policy implementation. The village headmen and other Village Council members were also interviewed and/or involved in a group discussion to asses the impact of the policy

intervention at the village level. Suggestions of the villagers were sought for appropriate policy interventions.

The impact of Supreme Court Orders, 1996-2002, Forest Conservation Act, 1980 and the Mining Policies / policy instruments were examined in the village Lumshnong in Jaintia Hills district. The people in this village belongs to Pnar or Jaintia tribe. The village has a population of 1500 with 250 households. The population comprised of 57% of females and 43% male. The level of literacy was also higher among the females. Of the total village land, 95% is forest land and 5% is used as kitchen garden; no other visible agriculture is seen in the area. About 99% of the forest land in the village is owned by private individuals and only 1% is under the village common ownership. There was 100% dependency of the HHs on the forest as the main source of livelihood through timber trade before the Supreme Court intervention. After the intervention, timber trade was stopped totally and there is 100% dependency on limestone mining from the same forested area. The average income of 18% household was <Rs 3000, 32% between 3000-7000, 32% between 7000-10000 and 18% >Rs 10000. At the village level the total annual average income from forest was Rs. 450,000 lakhs and none from mineral extraction before policy intervention. After policy intervention there was no income from the forests whereas mineral (limestone/ coal) mining yielded Rs. 420,000 per annum. The alternate business of limestone mining yielded 7% less income than that was being earned from the forests previously. The dependency on forests is currently limited to firewood collection only. Previously, 33% of the population was employed in works related to the forests. After policy intervention, mineral extraction employed 40% of the population. However, average income for each HH was reduced by 43% after the change in livelihood sources due to the policy intervention. There was no visible all-round development due to the policy intervention. However, people stated that they were aware of the importance of conservation but suggested that selective tree felling should be allowed. Moreover, mining has made the area more degradable as no eco-restorations have been undertaken in the area.

The Mawthoh village in West Khasi Hills is a small Khasi village of 20 households. The total population of the village is 150 of which 53% are male and 47% female. The literacy level of the female population is 71% as compared to 53% of the male population. Of the total village area, 63% is forest land, which is completely under private ownership. About 31% of the village land is agricultural land, while 6% is kitchen garden. The 20 households of the village were almost 100% dependent on the forest for their livelihood. Agriculture and kitchen garden contributed only a small fraction to the food requirement. After the implementation of the Supreme Court order a few families turned to charcoal making. The regulation on tree felling led to a shift in the livelihood sources from forest to agriculture and kitchen garden. Such changes led to 60% and 90% increase in area under agriculture and kitchen garden, respectively. The income from the timber trade alone was about Rs. 100,000 per year before the policy intervention and it has become zero after its implementation. Interestingly, after the policy intervention income from the kitchen garden increased to Rs 10,000. Alternate occupations like agricultural labour earned an income of about Rs 40,000 and from mining labour the income was about Rs 20, 0000. However, the combined earnings from agriculture, kitchen garden, charcoal making and mining was 30% less than the previous earnings from the forest alone. Of the total household in the village 35 % had an income of less than Rs 3000 pm, 25% between Rs 3000-Rs 5000, 15% between Rs 5000-7000 and Rs 7000-Rs 10000, respectively and only 10% above Rs 10,000. Many households have taken up alternate occupations such as bee keeping. All the households stated that they

were aware of the importance of forests and its conservation after the implementation of the policy. In the aftermath of the policy intervention, timber trade came to a halt and 67% of the households claimed to have conserved the forest area. Another 33% of the household who did not own the forestland also suggested that selective felling of the trees should be allowed. The present study shows that prior to the policy intervention only 33% of the total population was employed in the forests, while 13% each was employed in agricultural activities and kitchen garden. After the policy intervention 40% of the population were employed in the agricultural field and kitchen garden. Hence, 80% of the total population were employed after the policy intervention as compared to the 60% previously. The value of labour for agricultural activities increased from Rs 60/day to Rs 80 for man and from Rs 40 to Rs 50 for women after the policy intervention. There was no all round development on the economic, social and physical front in the village to improve the livelihood sources consequent to the policy intervention.

Table 3: Impact of Supreme Court orders, 1996 – 2002, Forest Conservation Act, 1980 and Mining Policy, 2003 on livelihoods of forest-dependents in four villages of Meghalaya.

Parameters	Name of the villages		
	Lumshnong, Jaintia Hills	Mawthoh, West Khasi Hills	Molmegre West Garo Hills
Awareness of the policy	High	High	Moderate
General perception of the policy implemented	Bad	Bad	Good
Demography (M/F)	650 / 850	80/70	31/25
No. of Household	250	20	12
Dominant community			
Livelihood before policy intervention	Forest based, kitchen garden	Forest based, agriculture, kitchen garden	Forest based, agriculture, jhum cultivation
Livelihood after policy intervention	Mining, limestone business, kitchen garden,	Agriculture, Kitchen garden, Bee-keeping, Charcoal, agricultural labour, mining	Agriculture, horticulture, Govt. service
Major forest category	95% private forest	100% private forest	100% community forests
Landuse category (ha)			
Forests	500	50	200
Agriculture	0	25	150
Kitchen garden	5	5	
Mining	500	0	
Fishery	0	0	
Horticulture			150
Landownership pattern	95% Private	100% private	100% community forest
Dependency on forests as a result of policy intervention			
Before	100	100	100%
After	5	5	55%
Average income of the village before policy intervention (Rs)			
Forests	4550000	100000	36,000
Agriculture	0	0	12,000

Kitchen garden	0	0	
Fishery	0	0	
Mining	0	0	
Horticulture	0	0	10,000
Average income of the village after policy intervention (Rs)			
Forests	0	0	20,000
Agriculture	0	0	30,000
Kitchen garden	0	10000	
fishery	0		
Mining	4250000	20000	
Horticulture			48,000
Others (agricultural labour, govt. jobs, carpentry etc)	0	40000	
Income class of maximum households	32% in Rs 7000-10000	35% < Rs 3000	42% in Rs. <10,000 42% in Rs. 10,000 – 25,000 8% 25,000-1,00,000 8% in Rs. 1,00,000 – 1,50,000
Natural resources affected by the policy	forests	forests	forests
Involvement of villagers during policy making	nil	nil	nil
Implementation of the policy	High	High	High
Impact of policy on livelihood	Negative	Negative	Negative
Assets developed after policy intervention	Nil	Nil	Nil
Ban on tree felling implemented	Yes	Yes	Yes
Regeneration of forests	No	No	No
Awareness level on the policy	High	High	High
Alternatives suggested by the villagers	Selective felling of trees should be allowed	Selective felling of trees should be allowed	Alternative income source

Molmigre village in West Garo Hills having strong agriculture and agriculture base exemplifies the differential impact of Supreme Court intervention. The village is inhabited by Ambeng people, a sub-tribe of Garo community. The village has a population of 56 with 12 Households. Of the total population, 55% are male and 45% female. Of the total village land, 40% is forest land, 30% agricultural land and 30% horticultural land. 100% forest land in the village is under the community ownership. The dependency on forest was substantial although many households were dependent on agriculture and horticulture before the intervention of Supreme Court. But after the policy intervention, 45% of the people have stopped Jhum cultivation and other forest activities such as timber trade, and shifted to agricultural and horticultural activities such as plantation of cashewnut, orange, betelnut, and ginger cultivation. However, 55% of the households still practice Jhum. Before the policy intervention, the average income from forest was Rs. 36,000, from agriculture Rs. 12,000 and from horticulture Rs. 10,000. Following intervention, income from the forest has come down to Rs. 20,000 but it has increased from agriculture (Rs. 30,000) and horticulture (Rs. 48.000). About 42% of the village

people falls in the income class of <Rs. 10,000, while another 42% falls between Rs. 10,000 to Rs. 25,000. Another 8% comes each under the category Rs. 1,00,000 to Rs. 1,50,000 and Rs. 1,50,000 to Rs. 2,00,000 annually. All the HHs are not aware of the Supreme Court policy. There is a slow but positive impact of the policy on livelihood after the policy intervention. People suggested alternative income source and market demand for their products. The village people are slowly learning about the disadvantages of over-exploitation of natural resources. With the reduction of forest cover, most of the forest products found naturally are on the verge of depletion. This in turn, is affecting the people who are dependent on the forest products for their livelihood.

The present study clearly shows that villages where only Supreme Court orders were implemented experienced a reduction in their income as well as livelihood opportunities. The ethnic tribes in the villages of Lumshnong, Mawthoh and Molmegre were deprived of their livelihood sources from the forests as a result of the policy intervention. These villages tried to cope up with the changes in livelihood generation by taking up alternate occupations such as agricultural labour, mining of limestone/coal, charcoal making, bee-keeping, small trading etc. However the combined earnings from all these sources did not match up to the earning from the forest. An outcome of the policy implementation was more employment generation through livelihood diversification. Interestingly, agriculture and kitchen garden which were contributing only a small fraction to the livelihoods, became the major livelihood sources following the Supreme Court intervention. Kitchen garden which has an enormous scope for forest conservation and livelihood generation seems to have evolved progressively after the policy intervention. Charcoal making which emerged as one of the alternate occupation contributed a significant fraction to the total income of the villages. However, adoption of such destructive occupation has completely defeated the noble objective of Supreme Court intervention and also destructing the long-term livelihood resource base of the village. The indiscriminate mining of limestone and coal, especially in the Lumshnong village in the Jaintia Hills led to complete devastation of rich tropical forests. No capital, be it human, social, natural, financial or physical was improved following the Supreme Court intervention on tree felling. The policy was viewed by the villagers as a negative force that prohibits their livelihood earning from the forest. On the other hand, the two other powerful policy instruments viz., Forest Conservation Act, 1980 and Mining Policy, 2003 have neither been able to stop the conversion of forests to other landuses through charcoal making or limestone mining nor able to provide alternate livelihood provision to the people as an alternate source of survival for the people. This indicates the gap in policies in addressing the livelihood needs of the forest-dependent population to ensure forest conservation.

Impact of JFM Resolution, 2003/ NAP Guidelines, 2002

The impact of JFM Resolution, 2003 and NAP Guidelines, 2002 on the livelihood of the forest dependents has been studied in Umtngam village in Ri Bhoi district, and Rombakgre village and Indekgre village in West Garo Hills district.

All the residents of Umtngam village in Ri-Bhoi district belong to Bhoi tribe (a sub-tribe of Khasi community). The total population of the village is 1400 with 150 households. Of the total population 49% is male and 52% is female. Of the total village land, 50% was forest land and 495 ha was agricultural land. About 90% of the forest land is owned by the community and dependence of the people was 100% on the forests before the Supreme Court order. As a part of NAP intervention, fishery and vegetable cropping

were encouraged. As a result, areas under fishery and vegetable cropping were doubled. At present 33% of the total households (HH) had an average annual income of Rs 3000-5000, another 33% had an average income more than Rs 10000 and the rest of the HH had an average income between Rs 5000-10000. At village level, the total income from the forest was about 2,5 lakh, from agriculture about 1.5 lakh. After the NAP and JFM implementation, due to better protection, income from the forest increased by 50%, from agriculture 33% and from fisheries 100%. The livelihood of the villagers was positively affected as 11% of the population was employed in forestry works contributing 52% of the total income. Interestingly 100% of the male population was found to be involved in agricultural activities as against 67% previously, contributing 49% of the total income. Fisheries also contributed to livelihood sources as 1% of the male population engaged in pisciculture earned Rs 80000 (1% of the total income). There was overall development at social, financial and environmental level. Gender biases were largely altered as women were given special opportunity in functioning of the JFM. The social capital was strengthened by creating Farmers Association, JFMC and Women's Cooperative Society, 3 SHGs and Eco-club in the school. Natural capital was strengthened through community forests, fishery, water reservoir and land development. The physical capital was improved through road construction, electricity supply, water supply, construction of podium etc. The livelihood issues were addressed through providing better employment opportunities in plantation works, enhanced availability of NTFPs with better protection and by providing diversified livelihood opportunities under Entry Point Activities, a component specially designed for such purposes in NAP.

Table 4: Impact of JFM Resolution, 2003 and NAP Guidelines, 2002 on livelihood of forest dependents.

Parameters	Name of the villages		
	Umtngam, Ri-Bhoi district	Rombakgre, West Garo Hills district	Indekgre, West Garo Hills district
Dominant community	Bhoi/Khasi	Garos	Garos
Awareness of the policy	Very High	Very high	Very high
General perception of the policy implemented	Good	Good	Good
Demography (Male/Female)	450/ 480	140/134	73/ 69
No. of Household	150	76	28
Livelihood before policy intervention	Forest based (NTFP), agriculture, Jhum cultivation, Livestock	Jhum cultivation, Timber trade, Agriculture, Horticulture (Areca nut)	Jhum cultivation, timber trade, agriculture
Livelihood after policy intervention	Agriculture, Vegetable cropping, Reduced Jhum cultivation, Pisciculture, Increased livestock	Agriculture, Increased horticulture (cashew nut, areca nut, black pepper), medicinal plant plantation, wage labourer for forestry work under JFM	Agriculture, increased horticulture (cashew nut, betel nut, orange, black pepper, banana, pineapple), wage labour under JFM
Annual Income of households	50% in Rs 3000-5000 and 50% > Rs 10000	25% in Rs. <10,000 45% in Rs. 10,000 – 25,000, 26% in Rs. 25,000 – 50,000, 4% in Rs. 50,000 – 1,00,000	54% in Rs. <10,000 46% in Rs. 10,000 – 25,000
Literacy percentage		59.8	50

Landuse category (ha) (Before policy implementation/ After Policy implementation)			
Forests	450/450	350/350	200/200
Agriculture	450/480	150/160	250/255
Kitchen garden	1/1	18/20	1/1
Mining	0/0	8/8	0/0
Fishery	0.5/1.5	0/0	0/0
Bamboo plantation	0/0	0/13	0/3
Horticulture	0/0	180/200	100/150
Artificial plantation	0/50	0/0	0/28
Medicinal herb and shrub Plantation	0/10	0/18	0/0
Pasture development	0/0	0/0	0/16
Average income per household of the village before policy intervention (Rs)			
Forests	16,666	658	2857
Agriculture	10,000	395	893
Horticulture	0	132	429
Kitchen garden	Negligible		
Fishery	Negligible	Avg. income of the village before policy intervention	132
Mining	0		
Others	0		
Average income per household of the village after policy intervention (Rs)			
Forests	33,333	474	1786
Agriculture	30,000	790	1786
Horticulture		592	1786
Kitchen garden	Negligible	Negligible	Negligible
Fishery	533	26	357
New Employment opportunities created (Increase in employment after policy intervention)	14%	50%	70%
Assets created under the programme	Community Hall, Road construction and Fishery pond	Community hall, spring chamber, water storage tank, school (vision plus)	RCC foot-bridge on river Rongkhon, orchard, spring chamber, water storage tank.
Alternatives suggested by the villagers	Timely release of funds by the govt. will improve efficiency of the programme NAP has benefited several JFMC members to improve their livelihood and enhance their income. Such programmes should be continued	Diversification of livelihood opportunities should be given further importance, since it has helped people in enhancing their income.	Timely release of funds and market linkage for the products should be ensured.

The two villages investigated in Garo Hills yielded still encouraging results. Rombakgre village in West Garo Hills District is inhabited by the people belonging to Ambeng community, a sub-tribe of the Garos. The total population of the village is 213 with 76 households. Of the total population, 51% are male and 49% are female. Of the total village land, 50% is forest land and 20% agricultural land, and the remaining under miscellaneous land uses predominantly under horticulture. Through NAP 18 ha of forest land has been planted with medicinal herb and shrub plantation, 8 ha timber species plantation and 13 ha bamboo plantation. The village has about 200 ha land dedicated for horticultural species. 100% of the forestland is owned by the community and dependence of the people on the forest was almost 100% before the NAP was implemented. People were mostly involved in jhum cultivation and agriculture as their main occupation. They mostly practice mono-culture cultivation. Wood requirements for the local villagers are quite high for household consumption which amounts to about 280 cu.m. annually. Some directly sells house-posts, sawn timbers and firewood in bulk. These requirements were met from the local forests. At present, 25% of the total households have an average income of Rs. 10,000 – 25,000, 26% with an average income of Rs. 25,000 – 50,000 while the rest 4% with an average of Rs. 50,000 – 1,00,000. At village level, total income was about Rs. 50,000 from the forest, Rs. 30,000 from agriculture and Rs. 10,000 from horticulture. After the policy intervention, income from forest has declined to 50%. Many alternative sources of income have come up at the village level like horticultural plantations (cashew nut, areca nut, pine apple) and bamboo plantations, which are contributing to the rest 50% of the income. Almost 30% of the village people have earnings as daily wages from various JFM activities. Another 30% are involved in business of their agricultural and horticultural products. Out of the total population, 18% are skilled labourers. Only 1 person is involved in govt. job while remaining 30% practice agriculture. About 30% of the villagers who are involved in agriculture and horticulture still practice jhum cultivation. At the village level, awareness programme was given to the people regarding the environmental regulations and people's participation in development and protection of forests. JFMC has opened a school in Rombakgre named "Vision Plus". Besides these, agro-forest, home-gardens, horticultural plantations, community forests, water reservoir were created and are being managed by the JFMC. Many Self Help Groups (SHGs) were promoted because of the policy, which gives loan to the people. This has increased the economic conditions of the villagers.

Indekgre village in West Garo Hills district is also dominated by the Garos. The total population of the village is 142 with 28 households. Of the total population, 51% are male and 49% are female. Of the total village land, 53% is forest land, 53% agricultural land, 32% horticultural land, 5% land for artificial plantation, 0.6% under bamboo plantation, 3.38% under pasture development, 0.6% of land under timber plantation, 5% land under fisheries and the rest is uncultivable land. The forest area of the village is owned by the community and dependence of the people on forest was 100% before JFM intervention. People were mostly involved in jhum cultivation and agriculture was their main occupation. Fisheries, fuel wood plantations, timber plantations and pasture development have been undertaken by JFMC. At present, 54% of the total households have an average income of below Rs. 10,000 while another 46% has an average income between Rs 10,000 to 25,000. At the village level, total income was Rs. 80,000 from the village forest, Rs. 25,000 from agriculture, Rs. 12,000 from horticulture. However, after the policy intervention, the income from the forests has declined to 62% while that of agriculture and horticulture has increased to 50% and 24% respectively. The livelihood of the villagers was affected since jhum cultivation has decreased to 40% but alternative

sources of income from JFMC have been provided. Fisheries also contributed to the livelihood sources as some households who were engaged in pisciculture activities earned Rs. 12,000. People from Indekgre village also earned their livelihood by working as daily wage labourers in JFM activities.

With the implementation of NAP, it was found that general awareness about the importance of forests and their conservation, and perceptions on environmental regulations has increased substantially. Although many households still practice jhum cultivation, there is a general awareness about the ill-effects of jhum. The villagers also welcome promoting agro-forestry and development of their community forests. Clearing forests for fuel wood, grazing etc. have been stopped.

Thus, in all the three villages studied, there were an all round development of the villages after the implementation of the JFM, Resolution, 2003 and NAP Guidelines, 2002 in spite of the enforcement of Supreme Court Orders, 1996-2002. Such development of the village was possible because the Supreme Court policy was complemented by the implementation of the JFM, Resolution 2003 and NAP Guidelines, 2002. It is very interesting to note that there were diversifications of livelihood opportunities in all the three villages after the policy intervention. The total income of the households also increased from different livelihood sources. People have given their best to make NAP implementation a success. There was an all round development through community participation. Assets were strengthened in all aspects such as creation of SHGs, building of roads and podium, initiation of eco-clubs in the schools, increasing area under fishery, medicinal plant and bamboo plantation, and horticulture which contributed substantially to the total income of the households. Such all round development of the village was possible due to the initiative and vision of the JFM policy framework to strengthen the livelihood of the people and conserve the forests through community participation. One factor that could have catalyzed the success of the JFM policy in all the villages could be the community ownership of the forestlands as compared to the private ownership of the forests in Lumshnong, Daskiang and Mawthoh. The community ownership of the forests allows the uniform implementation of the policy for conservation and proper monitoring of resource utilization. In all the three villages, besides effective management of existing forests, the JFM policy stressed equally on regeneration of the forests and NTFP plantations for diversification of livelihood opportunities. The present study shows that the size of the population or the forests does not determine the success of livelihood generation; rather it is the effective policy that ensures the management of the natural resources. The forest ownership pattern, land use system and strengthening of the human, social and physical capitals are the other determinants that ensure livelihood of forest dependents and forest conservation. Umtngam, Indekgre and Rombakgre villages can be considered as model villages for the successful implementation of the NRM policy instruments aimed at conservation of natural resources without having an adverse effect on the livelihood of the people.

In the face of the Supreme Court ban on tree felling it is imperative that these policies focus on non-timber forest products (NTFPs) for livelihood generation of the rural people. It would also be of paramount importance to encourage agriculture and strengthen its infrastructure. However, given the rugged terrain of the state it would be more advisable that these policies take lessons from other parts of the country to development of home gardens, which are an excellent tool for subsistence, livelihood and conservation. The traditional tree farming and enrichment of forests and home gardens with fruit crops and medicinal and aromatic plants (MAPs) and inclusion of

pisciculture in these systems could be welcomed favorably by rural population of the state. Development of market channels and value addition to the products are also the tools to ensure conservation and livelihood generation of the ethnic tribes who are coping up with the changes in livelihood sources as a result of the NRM policy implementation.

Impact of IFAD programme

The Diskiang village in West Khasi Hills is a small Khasi village of 39 households. The total population of the village is 300 of which 60% is male and 40% female. The literacy level of the male population is 49% as compared to 36% among the female population. Of the total area covered by the village, 43% is forest area, which is under complete private ownership. About 44% of the village land is agricultural land and another 13% is kitchen garden. The 39 households of the village were almost 100% dependent on the forest for their livelihood since ages. Agriculture and kitchen gardening were only supporting occupations. After the implementation of the Supreme Court Orders, 1996-2002 there was no livelihood generation from the timber trade. As a result of IFAD intervention most of the households have shifted their livelihood sources from forest to agriculture and kitchen garden. Such changes led to an increase of 66% and 92% area under agriculture and kitchen garden, respectively. The income from the forests was about Rs.150,000 before the policy intervention, which has reduced to only about Rs. 50,000 per annum, mostly from NTFPs after its implementation. Interestingly, after the policy intervention, the income from the kitchen garden has increased to Rs 8,000. The contribution of alternate sources of income such as agricultural labour increased to Rs 80,000 and charcoal making contributed about Rs 40,000. However, the combined earnings from agriculture and kitchen garden were still 14% less than the previous earnings from the timber trade alone. Of the total household in the village 87 % had an income of less than Rs 3000 pm, 10% between Rs 5000-7000, 3% between Rs 7000-10,000, and none above Rs 10,000. All the households stated that they understood the importance of forest conservation after the implementation of the policy. But they all suggested selective felling of trees should be allowed. The present study shows that prior to the policy intervention only 33% of the total population was employed in the forests, while 10% was employed in agricultural activities and 7 % in the kitchen gardens. After the policy intervention 50% of the population was employed in the agricultural field and 33% in the kitchen garden. Hence, 83% of the total population were employed after the policy intervention as compared to the 50% previously. There was a substantial contribution of the policy intervention in the economic, social and physical aspects to improve the livelihood generation of the people.

Table 5: Impact of IFAD programme on livelihood of forest –dependents in three villages of Meghalaya.

Particular	Name of the Villages & Districts		
	Diskiang West Khasi Hills	Sadolpara West Garo Hills	Daribokgre East Garo Hills
Name of the policy impact being assessed	IFAD	IFAD	IFAD
Awareness of the policy	Very high	Very high	Very high
General perception of the policy (project) implemented	Good	Good	Good
Demography (M/F)	180/120	118/129	64/52
No. of household	39	37	16

Dominant community	Khasi	Garos	Garos
Livelihood before policy intervention	Forest based, agriculture, kitchen garden, livestock	Forest based, agriculture, Jhum cultivation, livestock	Forest based agriculture, Jhum cultivation, Orchard (Orange), livestock
Livelihood after policy intervention	Agriculture, increased kitchen garden, carpentry, employment, mining (due to supreme court order), increased livestock	Orchard cultivation, kitchen garden, increased livestock, forest improved jhum cultivation, agriculture, petty business	Orchard cultivation, pisciculture, bee keeping, cane and bamboo production, livestock, kitchen garden (squash), increased livestock
Major forest category	100% Private forest (individuals & clans)	100% community forest	90% community forest, 10% Govt. forest (under National park)
Forest (area in ha)	58	210	340
Agriculture (ha)	60	10	5
Kitchen garden (ha)	18	2	2
Multi-cropping jhum (ha)	Nil	80	60
Horticulture (banana, Areca nut, cashew nut)	:	1.2	6
Bamboo reserve	:	60	6
Forest reserve	:	32	
Fishery	0	2 No.	1 No.
Land ownership pattern			
Before	100% private	10% private 90% community	10% private 90% community
After	100% private	40% private 60% community	45% private 55% community
Average income per household before the policy intervention			
Agriculture	Nil	3000	2000
Kitchen garden	Nil	Nil	Nil
Fishery	Nil	Nil	Nil
Business	Nil	Nil	12,000 (Ginger)
Livestock	Nil	Nil	Nil
Horticulture	Nil	Nil	2,000
Forest	3846	3,000	7,000
Mining	Nil	Nil	Nil
Average income per household after the policy interventions			
Agriculture	Nil	6000	4,500
Kitchen garden	250	2000	1000
Fishery	0	1,000 (7 HH)	1,000 (2 HH)
Business	Nil	2162	10,000 (Ginger)
Horticulture	Nil	4,000	5,000
Livestock	Nil	5,000	8,000
Forest	Nil	6000	3000
Bee keeping	Nil	Nil	20,000
Mining [due to supreme court intervention]	1025	Nil	Nil
Agricultural labourer under NREGA	Nil	7,000	1250
Wage labourer	Nil	4,000	Nil

Bee keeping	Nil	Nil	1250
Natural resources impacted by the policy	Improved forest, better soil and water conservation practices.	Increased & improved forest, increased water, improved soil conservation practices; increased kitchen gardens	Increased & improved forest, increased water, improved soil conservation practices, increased kitchen gardens
Involvement of the villagers during policy making	Very High	Very High	Very High
Implementation of the policy	High	High	High
Impact of policy on livelihood	Positive & high	Positive	Positive
Increase in employment after policy intervention	33%	45%	40%
Employment before policy intervention	-	8%	10%
Assets developed after policy intervention	Yes	Yes	Yes
Ban on tree felling implemented	Yes	Yes	Yes
Regeneration of forest	No	Yes	Yes
Alternatives suggested by the villagers	Facilitate in the preparation of working scheme for tree felling; increased non-land based livelihoods.	Alternative source of income, good market value for their products.	Value addition, small factory like orange juice factories, selective felling of trees should be allowed.

Sadolpara village in West Garo Hills district is a Garo dominated community. The total population of the village is 247 with 37 households. Of the total population, 48% is male and 52% female. Of the total village land, 61% is forest land, 3% agricultural land, 20% jhum land, 15% bamboo reserve, 1% horticultural land and 1% fishery ponds. 100% of the forest land of the village is owned by the community and dependence on the forest was 100% before the policy intervention of International Fund for Agricultural Development (IFAD). People were mostly involved in jhum cultivation. However, after the policy intervention, people are involved in agriculture, kitchen garden and horticulture. Jhum cultivation has decreased to a larger extent and those who practice jhum are involved in multicropping jhum system. Fishery was also encouraged under IFAD programme. Banana, Arecanut, cashewnut production was done on large scale which has a high commercial value. 100% of the male population was found to be involved in agricultural activities as against 40% previously, contributing to 84% of the total income. Of the total income, horticulture contributes to 12%, livestock 15% and kitchen garden 12%. About 50% of the villagers working as labourers, which contributes to 33% of their total income. Fishery and small business, although small, also contributed to the village total income i.e. 0.5%. There was overall development at social, financial and environmental level. Women were given equal opportunity in every field and have the power of decision-making. Many self help groups were created under the programme, which developed the social capital. The community forests, fishery, water reservoir and bamboo reserve forests were created which improved the natural capital. Physical capital was improved through road construction, electric supply, water supply etc. An area of 32 ha of forest was reserved after the policy intervention and

registered under District Council Forest Act, 1958 as community forest. About 60 ha of area were declared as bamboo reserve. Though jhum cultivation cannot be stopped totally but, a high percentage of villagers are shifting from jhum to various agricultural activities, which were shown by IFAD. Regeneration of trees is a part of the policy programme where people are taking active part in conserving the natural resources. Horticulture is a very developing and advanced field where villagers are gaining maximum benefit. This has positively improved the economic and social conditions of the villagers. Proper markets for their products, timely release of funds, advanced technology for improvement of agriculture and horticulture are some of the key points suggested by the villagers.

The Daribokgre village in East Garo Hills District is also inhabited by the Garos. The total population of the village is 116 with 16 households. Of the total population, 55% are male and 45% female. Of the total village land, 82% is forest land, 12% is agricultural land, 0.48% is kitchen garden, 1.4% is under bamboo reserve and 15% is horticultural land. About 90% of the forest in the village is community forest and 10% is Government forest under Balphakhram National Park. About 100% population were involved in forest-based activities including jhum cultivation. A few households were doing some kind of horticultural activities such as orange cultivation. However, after the IFAD programme intervention, people were involved in orange cultivation, agriculture, pisciculture, bee keeping, livestock and kitchen garden while squash is being planted on large scale which is supplied to all over Garo Hills. One fishery pond was also dug which gives livelihood to 2 households. After the policy intervention, jhum cultivation and timber felling was stopped to a larger extent and people are paying much attention towards agriculture and horticulture. At village level, the total income from the forests was about Rs. 48,000; from agriculture Rs. 32,000, from ginger production Rs. 240,000, from horticulture Rs. 32,000. After the policy intervention, the income generation has increased to Rs. 112,000 from forest products like bamboo and cane, Rs. 72,000 from agriculture, Rs. 2,000 from fisheries, Rs. 80,000 from horticulture, Rs. 40,000 from livestock, Rs. 20,000 from agricultural labourers and Rs. 16,000 from kitchen garden. The financial, social and economic conditions of the villagers have improved. Many households have taken up bee keeping as alternative income source. Before the policy intervention, 90% of the people were involved in agriculture and horticulture. There has been an increase in employment from 8% to 45% in recent months as wage labourers. Women are more active and sincere in attending seminars, awareness programmes and meetings than men.

Chapter 7

CONCLUSION

Most NRM policies, which are being implemented in Meghalaya lack livelihood focus. Appropriate provisions need to be introduced in conservation and development policies and projects so that synergies can be established between livelihoods and conservation, and trade-offs between the two can be reduced. Many natural resources, having high potential to improve the livelihoods of the forest dependents are not covered under any policy instrument, ensuring their effective management for sustainable livelihood. This results in either over-exploitation or under-utilization of resources, calling for an urgent policy formulation for such resources. There are several areas during policy formulation stage, which need to be taken care of for effective policy implementation. For instance, the policy formulation process (hence policy content) in India is highly skewed towards influential groups, putting poor people in a disadvantageous position. In order to address these issues, there is a need of joint action by all the stakeholders, and above all, a sympathetic approach of the government towards effecting the necessary policy changes or transiting towards a completely new people-centric policy with strong focus on poverty alleviation through diversification of NRM –based livelihoods.

Suggested strategies for making NRM policies livelihood-oriented

The NRM policies should attempt for more equitable local distribution of the benefits through social mobilization, institution building and improved livelihood opportunities as evidenced in IFAD and NAP projects. The policies could be made more livelihood oriented through introducing a Sustainable Rural Livelihood (SRL) approach. SRL strategy is based on analysis of the capital assets from which the rural poor make up their livelihood (physical, social, human, natural and financial). Interventions aim to strengthen this capital in different ways depending upon the need (Rennie and Singh 1996). It also aims to provide the means to use these capitals as the basis for a wider range of and more sustainable livelihood activities. Following this approach, interventions will be made to address the non-agricultural livelihood needs of poor people, including food security, drinking water supply, savings and credit, transport, communications, non-land based income generation, and access to health and education services (DFID 2001, Grainger and Malayang 2006).

Specific NRM Policy amendment needs

Table 6. Matrix showing the NRM policy amendment needs

Policy Instrument	Issues to be addressed	Suggested remedies / inclusion
Supreme Court Intervention	The apparent misinterpretation of supreme court orders/policies has resulted in non achievements of the objectives through conversion of forests into other land uses.	Both the state government and the district councils must reach to the people with correct interpretation of the underlying objectives of the supreme court orders. Therefore, the extension wing within the forest department and district council needs to be strengthened.
	Livelihood needs till the Working Scheme is approved	A complementary programme with livelihood diversification has always neutralized the impact of

	have not been considered.	<p>supreme court intervention. Therefore, it is recommended that programmes with strong livelihood component should supplement the supreme court interventions.</p> <p>Appropriate programme support to the forest owners / dependents should be recommended. This may be achieved through synchronizing the forest area affected and the developmental programmes of different line departments.</p>
	Although autonomous district council forest acts provide provisions for registering the forests under private and community ownership, the same has never happened.	An analysis of the problems reveal that there is no land record or boundary mapping of such forests making it difficult for registration. Hence, immediate policy should be adopted to map and register the forests by the communities themselves through their capacity development and convincing them the benefits of such policy. Further while adopting such policy care must be taken to get rid of the fear psychosis in the minds of the forest owners that if the forests are registered the ownership may be diluted through government interventions.
	Considering the vast areas under private / community ownership, and given the limitations of human and financial resources with the forest department / district councils, appropriate and realistic strategy is not in place to complete the working scheme preparation.	<p>Villagers / forest owners need to be trained on the techniques of working scheme preparation, at least ground enumeration methods.</p> <p>Capacity of the forest officials in the forest dept and district council needs to be strengthened in terms of equipping them with modern technologies such as GIS for working scheme preparation.</p> <p>Preparation of working scheme should be a joint responsibility of the land owners / communities / district councils and state forest department.</p>
Industrial Policy	As an inter-sectoral policy fall out, the use of forest based raw materials by some specific industries is not only degrading the resource base of the state but also destroying / affecting the long-term livelihood of the forest dependent poor.	Industries utilizing forest products through unsustainable harvest need to be identified and completely debarred to operate till alternative technologies and/or sustainable harvest mechanism are in place.
Mining Policy	Although Mining Policy, 2003 deals with the livelihood issues of the displaced population, it does not specify the strategies and no Guidelines or Rules have so far been framed to implement these measures.	<p>Appropriate regulatory mechanism giving adequate awareness and power to the traditional institutions need to be in place.</p> <p>Sustainable mining has to be practiced giving adequate attention towards environmental conservation and ensuring secured livelihood for the natural resource dependent population. This has to be achieved both through appropriate policy amendments at national level,</p>

		introduction of new policy measures both at state and district council level and adopting large scale awareness programme among the land/mine owners and the traditional institutions who would have regulatory power to streamline the mining sector of Meghalaya.
NTFP Policy	No policy for any of the NTFP species of Meghalaya has been formulated, as a result of which NTFP remains neglected forest economy sector.	<p>Policy for cultivation, harvesting, marketing, value addition, technology transfer and financial investment need to be formulated for each of the important NTFP species of Meghalaya, ensuring the private / community ownership of the resources, and discouraging the state monopoly.</p> <p>The policy should aim at improving the livelihood of the NTFP cultivators / collectors through reducing the length of the market chain, providing support price at the time of need, imparting training on value additions, organizing the communities into self help groups for securing easy financing, entrepreneurship development and reduced dependency on middlemen and other exploiters.</p>
Agriculture Policy	Given the fact that agriculture is the second most important occupation following forest based livelihood, and the experience of IFAD intervention to enhance agriculture productivity through appropriate intervention necessitates adopting an effective agricultural policy for the state.	<p>Incentives to the agriculturists through imparting training to adopt better technologies and diversification of crops, particularly low volume high value crops.</p> <p>Discouraging the farmers to convert their fertile agricultural land to other non-agricultural land use activities due to myopic vision of immediate financial gain from such crops as rubber, Jatropha, etc. which in long term may affect the livelihood seriously.</p> <p>Improvement in jhum systems either through following the jhum regulation act strictly or reducing pressure on jhumland through diversification of livelihood opportunities should be undertaken.</p>
Poverty alleviation Policies	Forestry component is either absent or constitute a minor component in most poverty alleviation policies implemented by Department of Rural Development.	Given the fact that forestry has the potential both to increase the natural capital as well as address the livelihood issues, poverty alleviation policies, strategies and programmes take into account forests and forestry in a way that promotes rural livelihoods.

Taking lessons from Tribal Rights Act, 2006; NAP Guidelines, 2002; and IFAD's NERCORMP project experience, all the NRM policies being implemented in Meghalaya irrespective of their origin (i.e. whether formulated by Government of India, State Government or Autonomous District Councils) need to be reviewed and appropriate policy amendments as discussed above need to be effected. Even the policies with stringent conservation objectives such as Wildlife Protection Act, 1972; Biodiversity Act, 2002 need to have a pro-poor livelihood approach, which is not only important for their successful implementation but also necessary to improve the social, human, economic and the physical capital of the forest dependents, so that the trade offs between conservation and livelihoods could be reduced.

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