

Forestry discourses and forest based development – an introduction to the Special Issue

W. DE JONG^a, G. GALLOWAY^b, P. KATILA^c and P. PACHECO^d

^aProfessor, Center for Southeast Asian and Integrated Area Studies, Kyoto University, 46 Shimoadachichou, Kyoto, Japan 606-8501

^bProgramme Director Master of Sustainable Development Practice, Center for Latin American Studies/Center for African Studies, University of Florida, 470 Grinter Hall, Gainesville, FL 32611-5560, USA

^cScientist, Natural Resources Institute Finland, Latokartanonkaari 9, 00790 Helsinki, Finland

^dPrincipal Scientist, Center for International Forestry Research, Jalan CIFOR, Situ Gede, Sindang Barang, Bogor (Barat) 16115, Indonesia

Email: dejongwil@gmail.com, GGalloway@latam.ufl.edu, pia.katila@luke.fi, P.Pacheco@cgiar.org

Keywords: development discourse, community forestry, sustainable development goals, forest and climate change, green economy

INTRODUCTION

With the first quarter of the 21st century well underway there are promising developments but also crucial concerns regarding the current state and future direction of planet earth. The global political community unanimously came together to approve the Paris Agreement in 2016, the successor to the Kyoto Protocol and is now taking tangible steps to reduce greenhouse gas emissions. The United Nation member countries adopted in that same year the 2030 Sustainable Development Agenda, manifested in the Sustainable Development Goals (SDGs) that are now being pursued in a concerted fashion by a large number of actors, and at multiple levels. Forests and trees outside forests hold an important potential to contribute to the achievement of these global commitments; they are crucial for curbing climate change and contribute to almost all of the SDGs (Bonan 2008, Katila *et al.* 2017).

Significant progress has been made in many of the Millennium Development Goals, a precursor to the SDGs, particularly in economic and social aspects. Yet there are large gaps in others, for instance the goal that addressed protecting the integrity of the biosphere. The most recent report on the global environment paints a still disconcerting picture of the condition of the worlds' natural resources. Deforestation, and land and forest degradation, while declining in recent years, still occur at rates that are worrisome, often as consequences of ruthless or inconsiderate exploitation driven by short-term expectations of profits within producer countries, but also as negative spillover effect of growing demand in consumer countries. Deforestation also continues to be caused by local investors and rural dwellers eking out a living.

The latest global forest assessment (FAO 2015a) provides evidence that deforestation and forest degradation, while still common, have declined over time. An increasing number of countries, especially in Asia report a reversal of net deforestation to net forest cover increase primarily due to reforestation and plantation programs (de Jong *et al.* 2016). Persisting

deforestation is concentrated in hotspots characterized by rapid, widespread expansion of commodity crops targeting both domestic and global agricultural markets (Henders *et al.* 2015).

The interplay of multiple contemporary global processes such as population growth, rapid urbanization, migration, and changes in global production and trade patterns, have significant implications for the world's forests. Societal demands on forests have evolved and diversified with economic growth and development. In many countries where forests have been viewed as a source for timber and non-timber forests products or land for agriculture, there is a growing understanding that forests provide ecosystem services, many of which are vital for human well-being. Even with these evolving perceptions of forests, they continue to face powerful, conflicting demands from other economic sectors.

Shifting societal demands and impacts on forests have led to new international, national and subnational governance arrangements and transnational policy regimes (e.g. around legal timber trade, climate change mitigation, and biodiversity protection) aimed at meeting demand, while mitigating negative impacts. Indeed, efforts to curb natural resource degradation while mobilizing their use to contribute to development goals, are at the center of international, regional and national resource governance and policy arenas. Evolving environmental demands and the desire to reconcile economic and environmental goals, while accommodating multiple stakeholders and following good governance principles are issues that are reflected in the current debates embraced by forest environmental scholars (e.g. Landsberg and Waring 2014, Sayer *et al.* 2013). One rather recent approach to understanding forest policy and governance is by turning to the concept of discourse, discourse theory and discourse analysis. While discourse theories and analyses were developed by social scientists in the 1960s, it was not until the late 1990s that forestry social scientists began to embrace the discourse concept, theory and analysis, and apply it to the analysis of an array of forest and forestry related social processes (Leipold 2014).

This Special Issue of the International Forestry Review brings together 12 papers that are published under the title: ‘Shifting global development discourses: Implications for forests and livelihoods’. Collectively, the papers reflect changes in societal demands on forests and forest landscapes, changes in how multiple constituencies compete for forest goods and services (forest ecosystem services), and how these changes are influencing forest governance and policies in multiple international, national, sub-national and local contexts. The Special Issue explores how shifting global discourses influence forest management and conservation with important repercussions for livelihoods. This editorial introduces the Special Issue and provides a conceptual and theoretical basis to position the papers in a common framework. In section 2, attention is focused on forest development and discourse theory in forest science. Then, in section 3, the 12 papers are situated in the common framework alluded to. Next, section 4 draws on the contributions of the papers to further develop ideas introduced in section 2. Finally, section 5 concludes.

CHANGING FOREST DEVELOPMENT DISCOURSES

The concept and theory of discourse first entered forestry social science in the 1990s (Hajer and Versteeg 2005, Leopold 2014). Since then, scholars have utilized a variety of approaches with diverse theoretical underpinnings in their efforts to apply discourse analysis. In this growing body of work, definitions of discourse have ranged from linguistic perspectives to post-modern theories focusing on power relationships in society as expressed through language and praxis. An often cited and useful definition for this Special Issue defines discourse as: “An ensemble of ideas, concepts and categories through which meaning is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices” (Hajer and Versteeg 2005). Discourse, according to this definition, refers to a particular set of related ideas which are shared, debated and communicated using different formats, including academic writings, policy advocate communications, and public media. The term discourse is closely related to the concept of narrative. Among some discourse theorists, a discourse emphasizes the form and methods of communication of an ensemble of ideas, while a narrative emphasizes the content, i.e. meaning of the ideas of the discourse (e.g. Greenhalgh *et al.* 2012). Discourses can consist of an array of different elements presented as narratives or storylines (Hajer 1993). Depending on the social phenomena under interest, numerous successive or overlapping and parallel discourses can be identified at the same moment in time.

Since development cooperation became part of international relations, the dominant focus of development discourse has undergone frequent changes. The post-colonial period gave way to ‘modernization’ during the Cold War era followed by an emphasis on ‘basic human needs’ and ‘integrated rural development’ in the 1970’s. Then discourse became associated with ‘sustainable development’ and ‘participatory

development’ in the 1980’s and more recently ‘capacity building’, ‘human rights’, and ‘good governance’ in the 1990’s, and in recent years ‘poverty reduction’ (Leal 2010), ‘climate change’ and ‘transformational change’ (Di Gregorio *et al.* 2015). There is an overlap between shifts in development discourses and shifts in environmental discourses. Arts *et al.* (2010), for instance, provide an overview of environmental meta-discourses, which they believe have shaped and been shaped by global forest issues. They distinguish modernity, limits to growth, ecological modernization and sustainable development discourses. A more recent bioeconomy discourse (Pülzl *et al.* 2014) is described as a multi-source discourse that includes elements from limits to growth and ecological modernization, with theoretical assumptions based on neo-liberal economics.

Another layer of discourses of interest to this Special Issue corresponds to international discourses on forests and forestry that have been in the public debate and communication media since the 1960s. These discourses have evolved, linked to notions of industrial forests, wood fuel, forest decline, forest parks, deforestation, degradation, sustainable forest management, forest-related traditional knowledge, and biodiversity conservation (Arts *et al.* 2010), and have been instrumental in the process of building wider discourses and narratives with regard to sustainable development, and recently on climate change mitigation and adaptation.

In a similar fashion, shifts in development and environmental discourses are reflected in changes in forest discourses and include the reframing of the problems and possible solutions related to forests and their relevance for societal needs, such as energy and food (FAO 2015b). In connection with the bioeconomy discourse, for example, the industrial forestry discourse has been reframed with the bioeconomy discourse, and the fuel wood crisis discourse with woody biomass production and its relevance to climate change mitigation (Pülzl *et al.* 2014) and renewable energy discourses. As far as the food security agenda is concerned, evolving narratives stress how forests and forest landscapes can contribute to meet the needs of an increasing demand for nutritious food (HLPE 2017).

Forests entered the rural development domain in the 1970s, when development organizations such as FAO recognized the importance of trees and forests for firewood and other purposes, and how the provision of important products and services might be affected by deforestation and/or forest degradation (FAO, 2015b). Many regions of the world, often with low-income, rural populations, had already been impacted by deforestation due to forest conversion. The lack of trees on the landscape was seen to be a major environmental problem with social and economic repercussions. Picking up on pioneering work by anthropologists that described indigenous forest use and management (e.g. Conklin 1957), anthropologists, geographers, ethnobotanists and scholars from other fields refocused attention to local forest management in the 1980s. This coincided with the transition from rural development as the main focus of development cooperation to sustainable management of natural resources as a win-win for poverty alleviation and conservation. This transition

was clearly evident in the outcomes of the 1992 Earth Summit, which advocated placing greater emphasis on local forest management and the use and commercialization of non-timber forest products as a promising path to achieve tropical forest conservation, while improving rural livelihoods. This approach was tested in the widespread implementation of integrated conservation and development projects, particularly in the Global South, and often under the umbrella of community forestry, as defined by Charnley and Poe (2005): “*Forest management that has ecological sustainability and local community benefits as central goals with some degree of responsibility and authority for forest management formally vested in the community.*”

The predominant global development perspective at that time, thus became anchored in ‘local based development’ and ‘decentralized management’, and community forestry can be seen as a narrow representation of it in the forest sector, frequently linked to the interests and demands of indigenous peoples. Community forestry became a process driven by projects involving forest community support activities largely initiated and carried forward by rural development activists representing development agencies, business-conservation partnerships and national non-governmental organizations and government agencies. Over time, these concerted efforts led to community forestry being integrated into national policies, legislation, and also into academic inquiry (Arts *et al.* 2017, Baynes *et al.* 2015, Charnley and Poe 2007, Katila *et al.* 2014, Pagdee *et al.* 2007, Pelletier *et al.* 2016).

There is now an intersection between community forestry discourse and that focused on climate change mitigation and adaptation. It is also viewed as a promising option to progress towards goals related to livelihoods of forest communities and the simultaneous provision of forest ecosystem services for an array of different stakeholders. One prominent example, for instance, is to direct compensation for avoided forest carbon emissions to forest communities who protect forests from deforestation and degradation. Under multiple international REDD+ programs, communities, that over the past few decades have been granted rights over forestlands and forests in many parts of the world, are now meant to be compensated for avoided deforestation and thus avoided atmospheric carbon emissions. This approach is similar to integrated conservation and development projects that seek to increase livelihood benefits to communities that make concerted efforts to conserve forests and biodiversity.

Compensation for carbon and biodiversity conservation are but two examples of the mechanism known as Payment for Ecosystem Services (PES). Other ecosystem services involving forest communities have been analyzed for their potential to be subjected to PES schemes. More recently, the focus has shifted to the potential role of forests in adaptation strategies that increase community resilience to climate change by mitigating negative impacts on rural livelihoods (e.g. Locatelli *et al.* 2015, Saxena *et al.* 2016).

Interestingly, evolving demands on forests by multiple actors is strongly associated with changes in the international and transboundary governance frameworks on forests, which

not only look at forests in the contexts of sustainable forest management and legality, but also with regard to governance of ecosystem services, including carbon emissions. This has enhanced forest and biodiversity management and carbon monitoring know-how, and technology and practice at all levels and among all actors. Concomitantly, there have been changes in institutional architecture, policy frameworks, and regulatory measures that affect forests. As a result, forests are currently strongly embedded in multiple international conventions, for example, the Framework Convention on Climate Change, the Convention on Biological Diversity, and the Convention on Desertification, among others. In response, national governments have adopted national forest plans, national biodiversity strategies, and are implementing national REDD+ strategies. They are also adopting bioeconomy policies and developing national climate change adaptation strategies, that include special measures and considerations related to forests.

The evolving and growing demands on forests and the hope that forests may contribute to rural development is reflected in multiple forums, international and national initiatives, and platforms, leading to multi-stakeholder commitments on forest-related goals (e.g. legality, zero deforestation, and restoration). Forests are now linked to zero deforestation, bioeconomy and green growth strategies, and are seen as a key element in the emergence of a greener economy capable of balancing more sustainable production and consumption (e.g. UNEP 2011). The zero deforestation initiatives, resulting from the New York Declaration on Forests (2014) has attracted increasing attention, mainly from consumer goods manufacturers, retailers and traders, concerned about risks that deforestation poses to their corporate reputations. The zero deforestation movement has motivated several platforms, notably the Tropical Forest Alliance 2020, to implement operational commitments to delink agricultural commodity supply and deforestation. Complementary, restoration initiatives (e.g. the Bonn Challenge) are also enriching current discourses on the avenues to protect planetary environmental integrity. Finally, forests have also been shown to have considerable potential to contribute to the attainment of the sustainable development goals adopted in 2015 (e.g. IIED 2014).

In summary, new forest development discourses have emerged associated with wider debates on planetary boundaries and the sustainable development goals, climate change mitigation and adaptation, and transitions to a greener bioeconomy, which collectively are dominating international forestry debates. Others, in contrast, have moved to the background, while they have not entirely disappeared (Arts *et al.* 2010).

BRIEF INTRODUCTION TO THE PAPERS OF THE SPECIAL ISSUE

All of the papers in this Special Issue can be linked to one or several forest development discourses, or to what Arts *et al.* (2010) characterize as environmental meta-discourses. Three

papers engage in conceptual discussions on these meta-discourses. The Sconfienza (2017) paper specifically identifies and compares three environmental discourses and their embedded norms: ecological modernization, civic environmentalism, and radical environmentalism. This paper makes the link with a normativity that underpins the three discourses. The contrasting normativity results in quite different and possibly conflicting policy options for REDD+. The second paper in this group, Tomaselli *et al.* (2017), also employs meta-discourse analysis to make its points. The paper distinguishes between a conventional expansionist and unsustainable worldview and an alternative ecological, i.e. sustainable, worldview. Both represent opposite economic development meta-discourses. The authors use this as a yardstick to assess UNEP's (2011) conceptualization of the green economy, asserting that while UNEP uses an ecological narrative, the organization's proposal to move forward towards a true green economy, including forestry, in reality remains situated within a conventional expansionists worldview.

The paper by Gregerson *et al.* (2017) focuses on the sustainable development discourse, a discourse that Arts *et al.* (2010: 60) also identify as a meta-discourse. Essentially, the paper aims to place forestry within the sustainable development concept, but argues, that if this is done, the forest-based sustainable development narrative needs to be revised. Rather than a fixation on specific end goals and targets, the narrative should adopt a set of principles that guide praxis through a process subjected to inevitable shocks and disruptions over time, including changing societal demands.

The next set of four papers specifically focus on analyzing forest-related discourses or an element of a forest-related discourse. They make a specific forest development discourse the topic of inquiry. Kleinschmit *et al.* (2017), for instance, undertake an analysis of the bio-economy discourse, which the authors identify as a meta-discourse. The authors assess to what extent environmental narratives form a part of the bio-economy discourse, and how environment and environmental policies are 'framed' and integrated into what the authors emphasize is a political discourse. The paper undertakes both discourse analysis and policy integration analysis. The paper by Winkel *et al.* (2017), on the other hand, explores illegal logging narratives in different contexts around the world. The paper illustrates how perceptions and discourse related to illegal logging vary among different countries, according to the underlying interests of different actors. In essence, Winkel *et al.* (2017) analyze national manifestations of the global, illegal logging discourse.

The other two papers in this second group by Pham *et al.* (2017a and *et al.* 2017b) look at quite specific manifestations of global discourses. Pham *et al.* (2017a) focus on the national REDD+ discourse in Vietnam, by exploring how REDD+ appears in public media. The authors are particularly interested in how the public media debate becomes a proxy for a national REDD+ policy debate, which because of the country's authoritarian government, is highly constrained within other governance forums. Pham *et al.* (2017b) examine narratives related to REDD+ in Indonesia and Vietnam, comparing them to green growth, or green economy narratives in each of the two countries.

The remaining five papers discuss more specific forest development issues, also linked to forest development discourses. The paper by Chowdhary *et al.* (2017) can be linked to the forest based climate change adaptation discourse. The paper reports on the development of an approach that in theory should make it possible to harness community forestry as a means to bolster climate change adaptation. The paper by Hiedanpää and Salo (2017), on the other hand, explores innovative approaches to forest ecosystem services entrepreneurship. The paper's basic argument is that innovative ideas are already being pursued to create economic opportunities for various actors with links to forests while complying with a new green economy normative. The paper refers to the concept of ecosystem service entrepreneurship as a discourse, and one can indeed recognize an ecosystem services global discourse that has emerged since the publication of the Millennium Ecosystem Assessment (MEA 2005). Ingram (2017) explores how governance arrangements adjust themselves when forest product value chains emerge and transform. The paper analyses how changes in these arrangements create both opportunities and challenges to support more effective non-timber forest product value chain governance. Again, while the paper does not specifically focus on analyzing or positioning itself in a specific forest development discourse, one can argue that it is part of both the non-timber forest product discourse and the forest governance discourse.

The final two papers focus on forest development related topics. Katila (2017) reviews the evolution of Finland's National Forest Programmes through a process of periodic revisions. The paper reviews how broader national problems that can be linked to forests are 'framed' in the country's national forest programmes. The paper does adopt a discourse theory approach to find answers to its overarching question, noting that while the Finnish National Forest Programmes adopt narratives of broader ecological and social sustainability, the core of the national forest programmes continue to emphasize profitability and competitiveness of the forest sector. Finally, Toppinen *et al.* (2017) examine how Finnish companies that operate in China view plantations, and juxtaposes these views with those held by village leaders. The paper argues that the analysis makes it possible to understand how companies that rely on plantation production can turn to an 'ecosystem services of forest plantations discourse' to obtain legitimacy and social acceptance for their operations in China, while also pointing out how different stakeholders understand to varying degrees the concept of ecosystem services.

Table 1 lists the papers of the Special Issue and indicates the forest development discourse that most closely links with each paper.

DRIVERS AND DYNAMICS OF FOREST DEVELOPMENT AND DISCOURSES

This Special Issue aims to bring together two main ideas. Firstly, it explores dynamic, conceptual underpinnings of forest development and how these play out in different contexts.

TABLE 1 *Papers of the Special Issue and their associated discourses*

Forest development discourse	Authors	Title
Forests and sustainable development	Gregerson <i>et al.</i>	Forests for Sustainable Development: A process approach to forests contributing to the evolving UN 2030 Agenda for sustainable development
Forests and climate change	Chowdary <i>et al.</i>	Integrated climate change adaptation: towards a participatory community forestry-based approach
Forest in a green economy	Kleinschmit <i>et al.</i>	Striving towards sustainability: integrating environmental concerns into the political bioeconomy discourse?
Forests and climate change	Pham <i>et al.</i>	From REDD+ performance to Green growth: Synergies or discord in Vietnam and Indonesia
Forest and climate change	Pham <i>et al.</i>	REDD+ politics in the media: A case study from Vietnam
Illegal logging and legality verification	Winkel <i>et al.</i>	Narrating illegal logging across the globe: Between green protectionism and sustainable resource use
Forests and climate change	Sconfienza	Environmental narratives and their normative presuppositions as heuristic devices to learn about forestry conflicts. The case of REDD+
Forest in a green economy	Hiedanpaa and Salo	Emerging forest ecosystem service entrepreneurship in Finland and Peru
Forests and sustainable development	Katila	Forestry development priorities in Finnish national forest programmes
Forests in a green economy	Tomaselli <i>et al.</i>	The problematic old roots of the new green economy narrative: How far can it take us in re-imagining sustainability in forestry?
Non timber forest products and forest governance	Ingram	Changing governance arrangements: NTFP value chains in the Congo Basin
Ecosystem services of forest plantations	Toppinen <i>et al.</i>	Forest ecosystem services, corporate sustainability and local livelihoods in industrial plantations of China: building conceptual awareness on the interlinkages

By forest development, we refer to options or opportunities to undertake forest management to achieve both broad and narrower societal goals. Secondly, the papers in this Special Issue look at the dynamics of forest development from a discourse perspective.

The focus on forest development from a discourse perspective leads to questions such as the following: What are the main forest development trends, how are they reflected in evolving discourses? What are the dynamics shaping shifts in forest development discourses, i.e. what are the drivers of changing forest discourses? How do these drivers relate to other environmental and development discourses, such as discourses on development, conservation or climate change? Do forestry or forest discourses reflect changes in global development discourses, and do forestry discourses affect the latter? A final question most relevant to forestry development outcomes is: To what extent do forest (development) discourses shape policy action and behaviors of different actors?

The papers in this Special Issue provide mixed answers to these questions. They cover a continuum of discourses and narratives that accommodate quite contrasting forest development approaches. At one extreme, they focus on a radical ecological worldview, or radical environmentalism points of view, which argue for extreme restraint in the use of nature. At the other, they examine narratives that see economic

growth as compatible with nature and forests (i.e. environmental sustainability). While Sconfienza (2017) and Tomaselli *et al.* (2017) indicate that while proponents of these contrasting environmental narratives do not easily find common ground, discussions in other papers suggest that some convergence and compatibility may be possible.

For instance, while the radical ecological worldview (Tomaselli *et al.* 2017) contrasts sharply with an expansionists worldview, Hiedanpää and Salo (2017) suggest that ecological expansionism may be more than an oxymoron if ecosystem services entrepreneurship or green economy can lead to sustainable development options. In other words, ecological modernization might satisfy the basic tenets of radical environmentalism. Equally, one could argue that the Gregerson *et al.* (2017) paper sees a way out of the apparently incompatibility between contrasting narratives or views by focusing on process, rather than on fixed outcomes.

Another question that begs answers relates to how forest development discourses emerge and enter communication channels through which they are transmitted and retransmitted. The papers in this Special Issue provide some insights into this, focusing attention on drivers that lead to the emergence of these discourses. Hiedanpää and Salo (2017), for instance, note that evolving societal awareness underlies the demand for new ecosystem services, resulting in the

emerging discourse on ecosystem services entrepreneurship. Similarly, the importance of climate change adaptation has gained broader recognition over time, but received little attention in climate change debates until the early 2000s (Pielke *et al.* 2007), although its importance was considered in UNFCCC documents. Now as climate change adaptation has gained prominence in global climate discourse, the discourse relating to the role of forests in climate change adaptation has emerged (Chowdary *et al.* 2017, Laxmi *et al.* 2017) and its international profile is likely to increase in years to come. Other forest development discourses that are emerging and gaining strength include zero deforestation, and forests' role in the green or bio-economy.

The drivers that shape and reshape forest development discourses lead to changes in societal interest in forests and forest ecosystems which in turn, influence the evolution of discourses over time. As indicated above, Gregerson *et al.* (2017) argue that SFM should be viewed as a process, rather than as an effort to achieve rigidly defined goals. This position contrasts with the widely held notion that progress and accountability require tracking progress towards measurable targets laid out in planning documents. The widespread use of logical frameworks in project planning exemplifies this approach, though many authors have emphasized the need to integrate flexibility into logical frameworks to accommodate contextual differences and unforeseen factors influencing project performance (Bakewell and Garbutt 2005). The approach proposed by Gregerson *et al.* (2017) seems to align with views previously expounded by Campbell and Sayer (2003), who argue for adaptive management when pursuing forest development goals, rather than rigid planning to achieve fixed targets and outcomes, an outmoded approach that often predominates in development interventions.

The papers also illustrate how the content and interpretation of particular forest development discourses can vary among different constituencies or geographic locations. While it might be argued that a discourse on a single issue does not necessarily have to reflect a narrow view on a societal problem and its underlying causes and possible solutions, some discourse theorists would characterize alternative views on a specific societal issue as competing discourses. Independent of one's position on this topic, it is important to recognize that interpretations of a forest development discourse often vary significantly in different contexts as illustrated by Kleinschmit *et al.* (2017) and Winkel *et al.* (2017). Winkel *et al.* (2017), for example, find that considerable difference exists in national narratives of the forest legality discourse across countries like Australia, Cambodia, China, the EU, Indonesia, Peru and the US. The paper concludes that these types of differences need to be recognized, for instance if and when a more institutionalized international forest legality regime is being considered. For their part, Kleinschmit *et al.* (2017) review the bio-economy discourse among EU member countries, observing that the discourse is adopted and communicated by different stakeholders. Again, the motivation for acceptance or adoption varies depending on the particular interests of the stakeholders. These examples illustrate that in essence the emergence of discourse can be viewed as an

exercise of power since they seek to influence meaning and social practices. Political debate and contestation influence how discourses play out over time (Hajer and Versteeg 2005). In the case of the bio-economy discourse within the EU, proposals to mobilize forestry are still lacking, as are strong cases for integrating environmental policies into emerging bio-economy policies.

Another challenge associated with the understanding and interpretation of discourses is pointed out in this Special Issue. Once a particular discourse emerges in political and professional spheres, it often must be communicated in an appropriate fashion to stakeholders closer to where the issue of interest plays out. Several of the papers (Sconfienza 2017, Pham *et al.* 2017b; Toppinen *et al.* 2017) demonstrate that while forest development discourses shift, understanding among key actors of an emerging discourse often lags, creating a barrier for meaningful participation. In other words, broad societal understanding of discourses often fails to keep pace with discourse changes. This is problematic since an emerging discourse may conflict with existing, local interpretations of the world, or they may be shaped by local powers or hegemony that influence how some discourses are interpreted and become dominant.

The lack of understanding of shifting discourses is not limited to marginalized stakeholders such as inhabitants of rural communities, but often extends to representatives of governmental agencies, NGOs and corporate entities. For example, Pham *et al.* (2017b) report that donors in Indonesia and Vietnam are skeptical that government officials even understand the concept of green growth, even though they participate in conveying forest and climate change and green growth discourses. For their part, Pham *et al.* (2017a) provide an illustrative example of how infrequently discourses like REDD+ actually find their way into the media; in this case in Vietnam with restrictions on public debate. It can be assumed, however, that frequently public awareness is not much greater in other, more open societies, except among persons 'in the know'.

Along this line of reasoning, Kleinschmit *et al.* (2017) observe the need for greater linkages between science and society through awareness raising and stronger integration of bio-economy research and teaching. Their paper highlights the lack of substantive links between policy making and the constituent parties that have a stake in a particular policy issue. Winkel *et al.* (2017) also echo this point, observing that in the countries included in their paper, knowledge and awareness of legality verification is absent outside government agencies and specialized civil society groups.

The apparent limited societal reach of forest development discourses is important since an underlying aspiration of many of these discourses is to galvanize support or even foster bottom up processes, like those alluded to in the following discourses: ecosystem service entrepreneurship (Hiedanpaa and Salo 2017), forest based climate change adaptation (Chowdary *et al.* 2017) or forest legality (Winkel *et al.* 2017).

In order for forest development discourses to influence action on the ground, they must reach relevant constituencies through effective channels. For that reason, studies like the

one undertaken by Kleinschmit *et al.* (2017), Pham *et al.* (2017a) and Winkel *et al.* (2017) are essential contributions to forest development scholarship, in particular, since they draw attention to linkages between emerging discourses, policy formulation and implementation. Each of these papers analyze how key forest development discourses are conveyed in modern day channels of communication and eventually find expression in the policy domain.

The five papers of this Special Issue situated closest to forest development implementation – Chowdary *et al.* (2017), Hiedanpaa and Salo (2017), Ingram (2017), Katila (2017) and Toppinen *et al.* (2017) – provide evidence that shifting forest development discourses find their way into forest development initiatives. Chowdary *et al.* (2017), for example, report on research that was inspired by the forest and climate change adaptation discourse, seeking to leverage local participation to identify and carry out adaptation measures, including community forestry (e.g. Dugan *et al.* 2016). Ingram (2017) links the long existing non-timber forest product discourse with new modes of governance discourse, suggesting alternative governance arrangements in non-timber forest product value chains. Toppinen *et al.* (2017) adopt an ecosystem services discourse to examine the converging or conflicting interests between forest companies and local leaders in plantation establishment in China. While possible less specifically linked to a forest development option, Katila (2017) also uses a social and ecological forest sustainability discourse to assess Finnish national forest plans, the related narratives and the actual praxis emerging from those plans.

CONCLUDING REMARKS

The appropriation, use and conservation of forests and associated problems and proposed solutions have led to evolving discourses and narratives. In some cases, these discourses and narratives are synergistic in nature and in other cases reflect competing or even conflicting interests. The more influential discourses find expression in new institutional arrangements and regulatory frameworks. Over time, forests and forest-based livelihoods have found resonance and expression at the global level, resulting in greater attention being placed on forest discourses and narratives.

In this Special Issue, we have focused on forest development discourses, placing special attention on the drivers that lead to their emergence and how they are reflected in forest policy, administration, management and forest development support. This analysis was conducted taking into consideration broader development, climate change and conservation discourses. The result has been 12 papers that confirm that forest development discourses are diverse, changing, and allow for the exploration of new options and opportunities for forest development initiatives. Each of the forest development discourses have clear linkages with major societal-environmental issues and thus with higher level meta- or even macro-discourses. The papers provide rich insights into current forest development thinking, and also into how this thinking is transmitted and shared. The papers also offer some

glimpses into how contemporary forest development discourses influence what multiple actors do to regulate, administer and implement forest development.

Pursuing a forest development discourse analysis is an innovative approach, even though discourse analysis in forestry is not new (Leipold 2014). We recognize the value of trying to better understand forest development discourses, their emergence, dynamics and impacts. We also recognize that this a complex topic, the boundaries of which are not easy to identify. Empirical evidence to distinguish forest development discourse is a challenge. It is even more problematic to find solid empirical evidence that establishes causal linkages between forest development discourse and corresponding forest policy design and implementation, forest administration or forest development support. While we acknowledge this, we believe that a focus on forest development discourses, how they emerge, why they change, how they are communicated and interpreted and finally how they impact the forest policies, forest development support or forest management was a relevant and useful departing point for our effort and this Special Issue.

REFERENCES

- ARTS, B. and BUIZER, M. 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest Policy and Economics* **11**(5/6): 340–347.
- ARTS, B. and Leroy, F. 2006. *Institutional dynamics in environmental governance*. Springer, Dordrecht, Netherlands. 294 pp.
- ARTS, B. and DE KONING, J. 2017. Community forest management: An assessment and explanation of its performance through QCA. *World Development* **96**: 315–325.
- ARTS, B.J.M., APPELSTRAND, M., KLEINSCHMIT, D., PÜLZL, H., VISSEREN-HAMAKERS, I.J., EBA'A ATYI, R., ENTERS, T., MCGINLEY, K., YASMI, Y. 2010. Discourses, actors and instruments in international forest governance. In: RAYNER, J., BUCK, A., KATILA, P. (Eds.) *Embracing complexity: Meeting the challenges of international forest governance. A global assessment report*. International Union of Forest Research Organizations, Vienna, Austria. pp 57–74, 172 pp.
- BAKEWELL, and GARBUTT, A. 2005. *The use and abuse of the logical framework approach*. International NGO Training and Research Center, Stockholm.
- BAYNES, J., HERBOHN, J. SMITH, C., FISHER, R. and BRAY, D. 2015. Key factors which influence the success of community forestry in developing countries. *Global Environmental Change* **35**: 226–238.
- BONAN, G.B. 2008. Forests and climate change: Forcings, feedbacks, and the climate benefits of forests. *Science* **320**(5882): 1444–1449.
- CAMPBELL, B. and SAYER, J. (eds.). 2003. *Integrated Natural Resource Management. Linking Productivity, the Environment and Development*. CABI International, Wallingford, Oxfordshire, UK.

- CHARNLEY, S. and POE, M.R. 2007. Community forestry in theory and practice: where are we now? *Annual Review of Anthropology* **36**: 301–36.
- CHOWDHARY, C.L., CONROY, W. GRITTEN, D. PAIRO-JMAHAKIJ, R.S. POUDYAL, B.H. SAPKOTA, L.M. and TRIRAGANON, R. 2017. Integrated climate change adaptation: towards an emancipatory community forestry-based approach. *International Forestry Review* **19**(S1): 24–40.
- CONKLIN, H. 1957. Hanunóo agriculture. An Example of Shifting Cultivation in the Philippines. *Unasylva* **11**(4).
- DE JONG, W., LIU, J. YOUN, Y-C. 2017. Land and forests in the Anthropocene: Trends and outlooks in Asia. *Forest Policy and Economics* **79**: 17–25.
- DI GREGORIO, M., BROCKHAUS, M., CRONIN T. and MUHARRON, E. 2015. Deadlock or Transformational Change? Exploring Public Discourse on REDD+ Across Seven Countries. *Global Environmental Politics* **15**(4): 63–84.
- DUGAN, S., GUSTAFSON, S. and LICHTFELD J. 2016. *Planning and implementing rural adaptation initiatives in the Lower Mekong*. USAID Mekong ARCC Legacy Report. U.S. Agency for International Development Regional Development Mission for Asia: Bangkok, Thailand. 48 pp.
- FAO, 2015a. *Global forest assessment, 2015*. Food and Agricultural Organization, Rome. 244 pp.
- FAO, 2015b. *FAO Investment Center: 50 years of support to investment in agriculture and rural development*. Food and agricultural Organization, Rome. 135 pp.
- FAIRHEAD, J., LEACH, M., and SCOONES, I. 2014. *Green Grabbing: A New Appropriation of Nature*. Routledge, New York. 408 pp.
- GREENHALGH T., PROCTER R., WHERTON J., SUGARHOOD, P., and SHAW, S. 2012. The organising vision for telehealth and telecare: discourse analysis. *Post Graduate Medical Journal* **2**(4): e001574.
- GREGERSEN, H., EL LAKANY, H. and BLASER, J. 2017. Forests for Sustainable Development: A process approach to forest sector contributions to the UN 2030 Agenda for Sustainable Development. *International Forestry Review* **19**(S1): 10–23.
- HAJER, M. 1993. Discourse Coalitions and the Institutionalisation of Practice: The Case of Acid Rain in Great Britain. In: *Fischer, F. and Forester, J.* (Eds.) *The argumentative turn in policy analysis and planning*. Duke University Press, Durham/London. 352 pp.
- HAJER, M. and VERSTEEG, W. 2005. A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. *Journal of Environmental Policy & Planning* **7**(3): 175–184.
- HENDERS, S., PERSSON, U.M. and KASTNER, T. 2015. Trading forests: Land-use change and carbon emissions embodied in production and exports of forest-risk commodities. *Environmental Research Letters* **10**(12).
- HLPE. 2017. *Sustainable forestry for food security and nutrition*. High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. 136 pp.
- HIEDANPÄÄ, J. and SALO, M. 2017. Emerging forest ecosystem service entrepreneurship in Finland and Peru. *International Forestry Review* **19**(S1): 113–124.
- IIED, 2014. *Sustainable development goals and forests: A summary of an open working group debates and country reflections*. International Institute for Environment and Development, London. 17 pp.
- INGRAM, V. 2017. Changing governance arrangements: NTFP value chains in the Congo Basin. *International Forestry Review* **19**(S1): 152–169.
- LANDSBERG, J., and WARING, R. 2014. *Forests in our changing world: New principles for conservation and management*. Island Press, Washington, D.C. 224 pp.
- KATILA, P., 2017. Forestry development priorities in Finnish national forest programmes. *International Forestry Review* **19**(S1): 125–137.
- KATILA, P. GALLOWAY, G. DE JONG, W. MERY, G. and PACHECO, P. 2014. *Forests under pressure: Local responses to global issues*. IUFRO-WFSE, Helsinki. 561 pp.
- KATILA, P., DE JONG, W. GALLOWAY, G. POKORNY, B. and PACHECO, P. 2017. *Harnessing community and smallholder forestry for sustainable development goals*. IUFRO-WFSE, Helsinki. 23 pp.
- KLEINSCHMIT, D., ARTS, B. GIURCA, A. MUSTALAHTI, I., SERGENT, A., PÜLZL, H. 2017. Environmental concerns in the political bioeconomy discourses. *International Forestry Review* **19**(S1): 41–55.
- LAXMI, D.B., VAN OORT, B. STORK, N.E. and BARAL, H. 2015. Ecosystem services and livelihoods in a changing climate: Understanding local adaptations in the Upper Koshi, Nepal. *International Journal of Biodiversity Science, Ecosystem Services & Management* **11**(2): 145–155.
- LEAL, P.A. 2010. Participation: the ascendancy of a buzzword in the neo-liberal era. In CORNWALL, A. and EADE, D. (eds). *Deconstructing development discourse: buzzwords and fuzwords. practical action publishing*. Oxfam, London. 320 pp.
- LEIPOLD, S. 2014. Creating forests with words — A review of forest-related discourse studies. *Forest Policy and Economics* **40**: 12–20.
- LOCATELLI, B., BROCKHAUS, M., BUCK, A., THOMPSON, I., BAHAMONDEZ, C., MURDOCK, T., ROBERTS, G. and WEBBE, J. 2010. Forests and Adaptation to Climate Change: Challenges and Opportunities. In: MERY, G., KATILA, P., GALLOWAY, G., ALFARO, R.I., KANNINEN, M. LOBOVIKOV, M. and VARJO, J. (eds.) *Forests and society – responding to global drivers of change*. IUFRO, Vienna. 509 pp.
- MILLENIUM ECOSYSTEM ASSESSMENT, 2005. Volumes 1–5, Island Press: Washington, D.C.
- PAGDEE, A., KIM, Y. and DAUGHERTY, P.J. 2007. What makes community forest management successful: a meta-study from community forests throughout the world. *Society and Natural Resources* **19**: 33–52.
- PELLETIER, J., GÉLINAS, N., and SKUTSCH, M. 2016. The place of community forest management in the REDD+ landscape. *Forests* **7**: 170.

- PHAM, T.T., DI GREGORIO, M. and BROCKHAUS, M. 2017. REDD+ politics in the media: A case study from Vietnam. *International Forestry Review* **19**(S1): 69–80.
- PHAM, T.T., MOELIONO, M., BROCKHAUS, M. LE, N.D., and KATILA, P. 2017. From REDD+ performance to Green growth: Synergies or discord in Vietnam and Indonesia. *International Forestry Review* **19**(S1): 56–68.
- PIELKE, R., PRINS, G. RAYNER, S. and SAREWITZ, D. 2007. Climate change 2007: Lifting the taboo on adaptation. *Nature* **445**: 597–598.
- PÜLZL, H., KLEINSCHMIT, D. and ARTS, B. 2014. Bio-economy – an emerging meta-discourse affecting forest discourses? *Scandinavian Journal of Forest Research* **29**(4): 386–393.
- SAXENA, A., GUNERALP, B., BAILIS, R. YOHE, G. and OLIVER, C. 2016. Evaluating the resilience of forest dependent communities in Central India by combining the sustainable livelihoods framework and the cross scale resilience analysis. *Current Science* **110**(7): 1195–1207.
- SCONFIENZA, U.M. 2017. What can environmental narratives tell us about forestry conflicts? The case of REDD+. *International Forestry Review* **19**(S1): 98–112.
- TOMASELLI, M.F. HAJJAR, R. RAMÓN-HIDALGO, A.E. and VÁSQUEZ-FERNÁNDEZ, A.M. 2017. The problematic old roots of the new green economy narrative: How far can it take us in re-imagining sustainability in forestry? *International Forestry Review* **19**(S1): 139–151.
- TOPPINEN, A., D'AMATO, D.A., LÄHTINEN, K., REKOLA, M., WAN, M., CAI, D. and WEN, Z. 2017. Forest ecosystem services, corporate sustainability and local livelihoods in industrial plantations of China: building conceptual awareness on the interlinkages. *International Forestry Review* **19**(S1): 170–182.
- UNEO, 2011. *Forests in a green economy-A synthesis*. United Nations Environmental Program: Nairobi.
- UNEP, 2016. *Global environmental outlook (GEO-6): Regional assessments*. United Nations Environmental Programme: Nairobi. 23 pp.
- WINKEL, G., LEIPOLD, S., BUHMANN, K., CASHORE, B., DE JONG, W., NATHAN, I., SOTIROV, M. and STONE, M. 2017. Narrating illegal logging across the globe. Between Green Protectionism and Sustainable Resource Use. *International Forestry Review* **19**(S1): 81–97.