TRANSFORMING
Sustainable Development Diplomacy

Lessons Learned from Global Forest Governance

Hans Hoogeveen
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TRANSFORMING: SUSTAINABLE DEVELOPMENT DIPLOMACY

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Global Forest Governance

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Transforming Sustainable Development Diplomacy:
Lessons Learned from Global Forest Governance

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Thesis
submitted in partial fulfillment of the requirements for the degree of doctor
at Wageningen University
by the authority of the Rector Magnificus
Prof. dr. M.J. Kropff
in the presence of the
Thesis Committee appointed by the Doctorate Board
to be defended in public
on Wednesday, 6 January 2010
in the Aula

Hans Hoogeveen, Patrick Verkooijen
Transforming Sustainable Development Diplomacy:
Lessons Learned from Global Forest Governance,
176 pages.

Thesis, Wageningen University, Wageningen, NL (2010)
With references, with a summary in English

ISBN: 978-90-8585-533-0

Propositions

1. Sustainable Development is a global issue, which needs attribution of appropriate scale in order to attain successes in Sustainable Development Diplomacy (this thesis).

2. A portfolio approach should be adopted for successful Sustainable Development Diplomacy (this thesis).

3. The complexity of the solution has to match the complexity of problems, such as sustainable development (Najam, Christopoulou and Moomaw, 2004).

4. Given the inherent complexity and interconnections of involved issues a new diplomacy is needed to link multiple issues such as agriculture, forests, biodiversity and climate change in order to successfully address any one of them (Najam, Christopoulou and Moomaw, 2004).

5. The international system of diplomacy, given its fragmentation, lack of coherency and lack of implementation, is heading into a dead-end street.

6. Effective leadership requires a global and inclusive mindset to change traditional diplomacy towards a more flexible approach that can respond to rapidly changing conditions, while meeting international agreed goals.

Propositions belonging to the thesis, entitled

"Transforming Sustainable Development Diplomacy: Lessons Learned from Global Forest Governance".

Hans Hoogeveen
Wageningen, 6 January 2010.

Propositions

1. Institutional space is needed for successful Sustainable Development Diplomacy (this thesis).

2. Sustainable Development Diplomacy needs deeper participation of all relevant stakeholders (this thesis).

3. It is essential to engage development banks, such as the World Bank, in addressing any of the major sustainable development issues including forests, biodiversity, oceans, climate change or water (Najam, Papa and Taiyab, 2006).

4. A new diplomacy is required that recognizes the inherent complexity of issues and the changed realities of sustainable development governance (Najam, Christopoulou and Moomaw, 2004).

5. The obsessive attention for climate change is counterproductive for sustainable development.

6. Global leadership of the European Union is impossible if the internal structures, institutional arrangements and coordination mechanisms remain as they are now.

Propositions belonging to the thesis, entitled

"Transforming Sustainable Development Diplomacy: Lessons Learned from Global Forest Governance".

Patrick Verkooijen
Wageningen, 6 January 2010.

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ACRONYMS:

CBC	Centers for Biodiversity Conservation
CBD	Convention on Biological Diversity
CBFP	Congo Basin Forest Partnership
CDM	Clean Development Mechanism
CI	Conservation International
CITES	Convention on the International Trade in Endangered Species
COFO	Committee on Forestry
CPF	Collaborative Partnership on Forests
CSD	Commission on Sustainable Development
CSO	Civil Society Organization
EDF	Environmental Defense Fund
EIA	Environmental Investigation Agency
ENB	Earth Negotiation Bulletin
ETS	Emissions Trading Scheme
FAO	Food and Agriculture Organization
FERN	Forests and European Union Resource Network
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Program
FPIC	Free, Prior and Informed Consent
FSC	Forest Stewardship Council
GEF	Global Environmental Facility
GFG	Global Forest Governance
GFP	Growing Forest Partnerships
GHG	Greenhouse Gas
IFF	International Forum on Forests
IGO	Intergovernmental organization
IISD	International Institute for Sustainable Development
IPF	International Panel on Forests
ITTA	International Tropical Timber Agreement
ITFF	Interagency Task Force on Forests
ITTO	International Tropical Timber Organization
IUCN	International Union for the Conservation of Nature and Natural Resources

IUFRO	International Union of Forest Research Organizations
IWG	International Working Group on Forests for Interim Finance
MDGs	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
NLBI	Non-Legally Binding Instrument on All Types of Forests
NGO	Non-governmental organization
PES	Payment for environmental services
PPP	Public Private Partnership
PROFOR	Program on Forests
REDD	Reducing Emissions from Deforestation and Degradation
RRI	Rights and Resource Institute
SDD	Sustainable Development Diplomacy
SDG	Sustainable Development Governance
SDGD	Sustainable Development Governance and Diplomacy
SFM	Sustainable Forest Management
TFD	The Forest Dialogue
TIMOs	Timberland Management Organization
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on the Environment and Development
UNDP	United Nations Development Programme
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UN-REDD	United Nations Collaborative Programme on REDD
WCED	World Commission on Environment and Development
WCFSD	World Commission on Forests and Sustainable Development
WCS	World Conservation Strategy
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

Preface

Since forest issues entered the international agenda in the early 1980s, global forest politics and policies have been developed rapidly. Compared to three decades ago, even though the system of global forest governance has achieved much in the way of new instruments, more money, and a more participatory and active system than anyone anticipated, deforestation and forest degradation continues. Global forest governance is the end product of an array of political, economic, environmental and social dynamics arising at the international, regional, national, and local level. Over the last few decades, particularly since 1992, a whole array of forest instruments, organizations, and institutions have been developed – some organically and others deliberately – the sum of which looks remarkably like an early, and rather disheveled, prototype of a global network of forest actors and institutions; one or both of the authors played an active role in at least part of the formation of this emerging system of global forest governance. Hans Hoogeveen represented, amongst others, the European Union in 1997 and 2005 during the negotiations at the United Nations Forum on Forests (UNFF) and its institutional predecessor. Since then he was elected as the Chairperson of the seventh session of the United Nations Forum on Forests (UNFF7) which negotiated in the words of the Secretary General of the United Nations, Ban Ki Moon, 'a landmark agreement: the first-ever non-legally binding agreement on forests, endorsed by the General Assembly. The new instrument addresses the full spectrum of issues, from complete protection to sustainable use, from people to the environment to economics" (September, 2009). Patrick Verkooijen acted as member of the EU Presidency team in 2005 and the Chair's Presidency team of UNFF7 after which he took on the assignment at the World Bank to develop a new global Forest Investment Program (FIP) with a view to leverage increased funds to bring about the reduction of deforestation and degradation and to improve sustainable forest management, leading to the reduction of emissions and protection of forest carbon stock.

During this engagement, we came gradually, but surely to the realization that the traditional tools of diplomacy that we have applied and the system of governance we have tried to construct around forests has not worked. Despite all the good efforts and best intensions, deforestation and forest degradation continues rapidly. It is not the actors who have tried to solve the problem have not worked hard enough, nor that they have not come up with good ideas. It is, instead, that traditional tools of diplomacy that they have been applying ever so diligently are no longer the appropriate tools. Although we are great believers and strong advocates of global governance and diplomacy, based on our experience in multilateral negotiations we developed a rather intuitive unease of the mismatch between global level outcomes – if reached at all – and national or sub national implementation of these agreements. More often than not, many decisions stemming from UN diplomacy bear the risk of becoming a dead letter without little or no impact at the (sub)national level. During our many encounters in New York we also witnessed increasing negotiation fatigue, particularly among developing countries, who struggle to meet the institutional demands as the number of institutions and international agreements increases.

As the first decade of the twenty-first century comes to a close, mounting challenges facing the world are characterized by the intensifying interconnectedness of global and regional issues: political tensions, climate change, water shortages, financial, economic and food crises, ecosystem disruptions, increasing instability and persistent poverty. Against this background of a shared urgency for transformational change, we decided some years ago in the margins of a global negotiation session in New York to organize our thoughts and views in a more comprehensive manner allowing us to reflect upon our experience. A partial offspring of this common agenda is this thesis which was conducted amidst our very intensive travel commitments stemming from the demands of the international calendar. In this, we would like to share our insights and personal experience of the dynamics in the evolution of the system of global forest governance with a view to draw lessons of the factors that make the system of global forest governance and its diplomacy more effective for altering the behavior of actors in the system and, in the process, for solving or alleviating deforestation and degradation. We fully realize that people clear and log forests for a reason. A simple economic framework applies to all forest actors: subsistence households and large companies; farmers, ranchers, and loggers. The framework revolves around the relative attractiveness of maintaining forest relative to converting it to agriculture or other land use functions. Many observers predict that pressures on forests will not disappear soon. Croplands, pastures, and plantations are expanding into natural forests and will likely to do so for the next 30-50 years.

Despite these dark forecasts, we are both optimists by nature. And, we believe, for good reasons. In our practice we notice that there are many signs that a new form of diplomacy is already beginning to emerge. Complex connections are beginning to be made. Innovations around actor participation are being experimented with. Non-traditional instruments are emerging. We are convinced that there is great potential 'untapped' to find other ways of ensuring the level of collective action required to address the next generation of sustainable development challenges. To do this, the art and science of sustainable development diplomacy must be enhanced. Diplomats, business leaders, non-governmental organizations, scientists, indigenous peoples and many others will need to find new ways of working together. As Larry Susskind already noted in his seminal work about 15 years ago 'it will not help, the way it sometimes does, to break the problem into smaller, more manageable, pieces' (Susskind, 1994). Only a comprehensive global approach to sustainable development will work. This, in short, is our aspiration for a revitalized New Diplomacy for the Global Governance of Forests.

This thesis could not have been written without the help of many people. It is a pleasure to record a number of debts of gratitude to those who played critical roles at one time or another during the life of the preparation of this thesis. We had the extraordinary benefit over the last years to develop and refine our thinking on sustainable development diplomacy in general and global forest governance in particular through a constant dialogue with superb colleagues and close friends at the Fletcher School of Law and Diplomacy, Professor William Moomaw, and Professor Adil Najam of the Pardee Center at Boston University. Over the years, we not only worked very intensely

with both of them – mostly over the weekends in Boston – on joint publications, such as our joint Forest Financing Mechanism (FFM) report and a closely related book project on Sustainable Development Diplomacy, but we were also inspired to further develop and test new ideas and programs with the newly established Program on Sustainable Development Diplomacy (SDD) as just one example. For us, it is crystal clear, without their support this thesis would not have been possible. We are also particularly grateful to our principal supervisor at Wageningen University, professor Rudy Rabbinge. His deep and comprehensive understanding of sustainable development at all levels and his informed criticism inspired many refinements and improvements in the text. Any remaining errors are, of course, our sole responsibility.

Finally, our deep appreciation and love goes to our respective spouses, Margot de Jong and Nicole Verstegen, who were and remain a constant source of support and inspiration while taking care of our families during the intense travel over the last years. Their presence in our lives is a constant source of enrichment and gave us a sense of purpose to finish the thesis. To them we dedicate this thesis, while we know that the journey is not over.

Hans Hoogeveen and Patrick Verkooijen
Boston, The Hague, New York,
Washington D.C.
November, 2009

Summary

The Crisis of Multiple Crises

Since sustainable development entered the international agenda in the mid-eighties, sustainable development governance (SDG) has evolved rapidly. The system we have today reflects both the successes and failures of this process. There is growing awareness that the present system of development is rapidly and irreversibly eroding all three pillars of sustainable development: economic, social and environmental; and numerous international efforts have emerged to address these threats. The urgency, severity, complexity and global scale of the problems have outgrown the political institutions of governance, which are heavily constrained by competing interests of the parties, and by a set of operating principles that favors state interests over all other values. The international community has agreed that sustainable development should be the road all nations should travel. Yet governments and institutions are not yet capable of engaging in the diplomacy and creating the institutions of governance that are required to achieve the goals of well being for all citizens of the world within a supportive natural environment, and an equitable economy using effective social and governmental institutions.

The term Sustainable Development Governance refers to the sum of organizations, policy instruments, financing mechanisms, rules, procedures, norms, that regulate the processes of sustainable development at the global, regional, national, and local level. Sustainable Development Diplomacy (SDD) is the tool, or the process, that is available to the international community to create an effective system of global sustainable development governance. The current governance system's high maintenance needs, its internal redundancies and its inherent inefficiencies, have combined to have the perverse effect of impeding the achievement of sustainable development worldwide (Najam et.al., 2006). Against this background, we define Global Forest Governance (GFG) as a subset of the broader sustainable development agenda. The development of GFG is highly interlinked with and related to the development of the encompassing system of global SDD. We take as our point of analytical departure that GFG is not only a cornerstone of sustainable development, but that to understand the complexities, challenges and nuances of GFG it has to be placed within the evolving concept of sustainable development.

We acknowledge that the term crisis is often overused. However, the rapid rise of multiple, interconnected problems of major proportions defies a more modest name. The world in the beginning of the twenty-first century is faced with intensifying interconnected global and regional issues, such as political tension and uncertainty, economic and food crisis, climate change, water shortages, ecosystem disruptions, increasing social inequality and persistence poverty. The food riots in certain regions of the world in 2008 were manifestations of these trends that blur the boundaries between political, economic, agricultural, energy, trade, climate change, technology and other factors. How to feed the estimated 9 billion people in 2050 is one of the biggest challenges we face. The disjuncture between the global nature of the challenges and

the national centers of decision-making became more than ever clear (Weiss, 2009). *We appear to be confronted with a crisis of multiple crises:* an energy crisis, a food crisis, a climate change crisis, an ecological crisis and, more recently, also a financial crisis. What is only now becoming apparent is that these individual large-scale crises are connected in complex ways, and our traditional approach to managing global and international problems is proving insufficient to the task. Forests, as is argued in this thesis, are at the heart of sustainable development, and provide a useful lens for examining this new phenomenon of complexity and the need for a new approach for managing it. While this study emphasizes the complexity of forest linkages and the implications for global forest governance and its diplomacy, not about the causes of deforestation and forest degradation, it is important to have a firm grasp on the latter. The breadth of the causes underscores the complexity of the problem and has significant implications for our analysis and the way forward.

This thesis builds on the premise that the goal of the international community has been to create an effective system of global sustainable development governance, including effective forest governance. Diplomacy is the tool, or the process, that is available to the international community to do so. In this study we will analyze why the international community has not succeeded in creating effective systems of global forest governance. Governance systems are assumed to be complex by definition (Hoogeveen et.al., 2008; Teisman et.al., 2008). These processes are the coordinated actions of public and private actors around collective issues (Boons et.al., 2008). We accept as a basic assumption that due to the diversity of issues, actors and instruments, the complexity of global governance, and, in particular, global forest governance has increased. Although complexity is not, in and of itself, a negative characteristic, it may create a set of challenges for the system of global forest governance, making it, amongst others, more difficult to accomplish a coherent set of goals on forests. The question is whether the system of global forest governance is equipped to address this complexity and if not, how this complexity should be addressed. In this, we claim that a reductionist approach exclusively focusing on the parts of the system alone does not generate an understanding of the system as a whole.

The goal of this study is to expand our understanding of the system of global forest governance and its underlying patterns. It builds on the working assumption that a de facto "system" of global forest governance already exists. In this, we define a system as the emerging interactions between the elements of the system that generate the outcome of governance processes (Boons et.al., 2008). We accept that the de facto system is neither neat nor simple and works in a rather non-linear, non-hierarchical, and intertwined fashion (Najam et.al., 2004). We accept that complex governance systems, such as this case study, must be analyzed by studying their parts as well as the emergent patterns that result from their co-evolution (Teisman et.al, 2008).

The overarching research question of this thesis is what we can learn about how the system of the diplomacy of global forest governance evolves by analyzing the components of the system in an integrated way. Is the current multi-dimensional process of sustainable development governance and its diplomacy evolving in a manner

that it can achieve the agreed goals, objectives and targets, such as those agreed within the realm of global forest governance? Based on this research we will aim to demonstrate that a type of new diplomacy is required to create a more effective system of global sustainable development governance, including global forest governance. The search for an answer to this question raises a series of more focused questions around three interrelated focal areas encompassing the system of global forest governance: issues, actors and institutions. These questions are embedded into the broader debate on what the drivers of societal change are on decision-making of predominantly centralized, top-down and vertical steering processes at the global level.

The emphasis of this study is to identify the factors that make the system of global forest governance and its diplomacy more or less effective as mechanisms for altering the behavior of actors in international society and, in the process, for solving or alleviating a variety of problems, including through addressing the underlying causes of deforestation and degradation.

Although we are aware of the broader scholarly debate, we accept as the relevant test for discerning an impact of this type is whether the system affects the management of the problem that motivated its creation by inducing changes in the behavior of states and other actors whose behavior is directly involved in the relevant behavioral complex. Our working assumption is that a system of global forest governance that channels behavior in such a way as to eliminate or substantially ameliorate the problem that led to its creation is an effective system. A system that has marginal behavioral impact, by contrast, is an ineffective system. This assumption implies, of course, that the concept of effectiveness as applied to the system of global forest governance defines a continuous variable. The system can range along a continuum from ineffectual arrangements, which wind up as dead letters, to highly effective arrangements, which produce quick and decisive solutions to the problem at hand (Young, 1994).

In our study we claim that the case study we have chosen for in-depth study in our analysis – the system of the diplomacy of global forest governance – has been in place long enough to compile track records that can be evaluated systematically. A central component of the case study, then, consists of a causal narrative that details the effects produced by the system of global forest governance and seeks to identify causal connections between the relevant behavior and the operation of the system. Causality will not be interpreted in this study in the pure positivist sense but much more for patterns within the complex system of global forest governance and the resulting dynamics.

We believe our case study is sufficiently diverse to provide insights into the nature of the various behavioral mechanisms and the conditions under which they operate relevant for the broader system of sustainable development governance and diplomacy. Based on our practical experience in the governance and diplomacy of a range of other complex global public good issues, such as biodiversity, fisheries, agriculture, and climate change, we expect our findings have relevance in these domains as well. From a theoretical perspective future research on other case studies within the domain of sustainable development should be developed as vehicles for probing the relevance of our model to

actual behavior governed by the broader system of sustainable development diplomacy.

The Emergent System of Global Forest Governance and its Challenges

Since forest issues entered the international agenda in the early 1980s, global forest politics and policies have been developing rapidly (Humphreys, 2006). The GFG system we have today may reflect both the successes and failures of this process. On the one hand, there is a high awareness of threats to forests and numerous efforts have emerged to address them globally. However, at the same time – and ironically partly because of the rather spectacular growth in awareness and initiatives – the GFG system may have outgrown its original design and intent in terms of addressing the problems and societal goals that led to its creation.

We accept as our basic assumption that the effectiveness of SDD will ultimately depend on its simultaneous implementation at both the global and domestic levels. This assumption also applies for GFG. National implementation is the ultimate indicator both to the efficacy of the GFG system and to meaningful actions on the ground (Young, 1994). However, within the context of our study, we focus principally on the global and institutional aspects of GFG, including efforts to create the support for domestic implementation, but not including the considerable challenges of domestic implementation itself. That is a crucial issue as well, and one worth seriously studying, but it lies beyond the scope of our study.

Forest issues are complex and have multiple perspectives and linkages to the full range of sustainable development issues, such as poverty reduction and livelihoods, trade and economic development, security, biodiversity and climate. To handle this complexity, GFG has shifted over time to better address emerging priorities. This evolution is not unexpected, as generally governance progresses and discourse evolves as issues change over time (Arts, 2008). Looking at GFG, the emergence of new dominant ideas have shaped – and reshaped – forest policy. Over the last forty years, these shifts have transformed forest policy from a 'commodity issue' into a 'biodiversity issue,' 'a sustainable development issue,' 'a human rights issue' among others (Arts, 2008). Global forest governance and diplomacy is facing the same basic problems and challenges as those of other aspects of sustainable development governance. These challenges all relate to the increasing complexity of GFG: (i) complexity of issues, inter-linkages, fragmentation, and proliferations of arenas, (ii) complexity of actors and lack of cooperation and coordination, and (iii) complexity of instruments and lack of implementation

Issues and Linkages

In this thesis we develop a pathway through the complexity and cross-sectoral nature of international forest policy from a multi-issue perspective. The realization that forests were much more than commodities to be claimed or land to be cleared altered the nature of the international dialogue significantly (Maini, 2004). New connections between

forests and other issues were increasingly being recognized, such as the dependence of indigenous peoples on forests for their livelihoods and security concerns associated with illicit activities (Maini, 2003). The emergence of these new linkages added another layer of complexity to the evolving system of global forest governance, which intensified more recently when climate change surfaced as a new international threat with a profound forest-related dimension. A range of sector-based lenses are used: development, trade, livelihoods and human health, security, biodiversity and climate change. Through these different lenses we seek to understand the extensive range of cross-sectoral linkages between these respective domains that affect forest management (Maini, 1996).

Actors in Global Forest Governance

Global forest governance, by its very nature, includes a vast number of actors that vary widely in their type and specific interests and goals. From global institutions to local civic groups, from national governments to indigenous peoples, from large multinational businesses to smallholders dependent on forest products – forests are a key concern for a very wide range of actors, with a variety of interests and with very different, and sometimes contradictory, priorities. It is not only that there are many actors; it is also that there are many different types of actors (Najam, 1997). Institutions carry with them the additional complexity that they are made up of individuals who operate as agents for larger group interests but they also have their own motivations and interests (Susskind, 1994). This thesis identifies major types of actors involved in the system of global forest governance and discusses the roles they play in the system. The purpose of doing so is not simply to demonstrate the complexity in actor constellation in this process but also to highlight that this complexity – or, more precisely, the complications that arise because of this complexity – impacts the efficacy of global forest governance. Effective governance requires that the tools of diplomacy are used to address and accommodate the differing priorities and interests of different actors in a way that is consistent both with their own priorities and with global forest priorities (Young, 1994). Managing actor complexity – in terms of numbers and diversity – is certainly a challenge, but it can also be an opportunity because more actors also provide more opportunity for coalitions, cross-trade, and innovative approaches to the division of responsibilities and roles in a complex system (Najam, 1997).

This thesis highlights the characteristics of various types of actors, points out nuanced distinctions within those types of actors and the ways those actors interact, and also provides examples of how these actors influence global forest governance. We do so by providing some illustrative examples of existing activities and initiatives that are already going on or are looming in the near future. In this thesis actors are divided in three broad meta-categories – state actors, market actors, and civil society actors. Within each of these meta-categories we provide a conceptual framework to help us arrive at a more nuanced sense of how actors in these sectors actually impact the state of the world's forests and their global governance. This in itself supports the claim for a polycentric perspective of global forest governance which seems a more adequate representation of the complex reality. However, there has been some headway in trying to involve non-state actors at the multilateral level, but these have often been piecemeal

attempts and token gestures. There is, as claimed in this thesis, an urgent need to rethink the question of actors and participation.

Policy Instrumentation

The proliferation of international instruments, especially treaties or conventions, which, particularly where global forest governance is concerned, have complicated the issue and made effective governance more difficult at all levels. For example, forests are addressed in different treaties or conventions and different international organizations in connection with various other issues, including climate change, trade, biodiversity and agriculture. A variety of international actors implements, monitors, and enforces these agreements through different means and with a lack of coordination capacity and mechanisms, resulting in a suboptimal system of global forest governance. Scholars as well as policy practitioners have become increasingly concerned about the 'messiness' of the global sustainable development governance system (often called the 'global environmental governance' (GEG) system, which is itself a problem since it focuses on only one of the three pillars of sustainable development). Amongst the issues of concern identified in this literature, the following are of special relevance to the system of global forest governance: scale of governance / subsidiarity; treaty congestion; institutional and policy fragmentation; negotiation fatigue; duplication and conflicting agendas.

The global forest governance system has been prolific in negotiating agreements, but, except for a few exceptions, has a rather dismal record in turning agreements into actual change and implementation on the ground. At the global level, negotiators formally meet within the UN system and given its intergovernmental character only governments are involved in the final decision-making. This leads to the strong notion of diplomats that they can rule, manage or make society from New York, Rome or Nairobi. It is not without reason that these diplomats press for treaties or conventions as the main instrument, because they feel that such instruments have the power to directly influence the behavior at the national or sub national level. This in itself has become one of the major stumbling blocks for achieving sustainable forest management worldwide. Such an approach does not give full justice to the changing national and international society where other non-state actors have gotten crucial roles and responsibilities for achieving global objectives. Many decisions stemming from UN diplomacy have therefore the risk of becoming a dead letter resulting in little or no impact at the national level. Given the complexity of sustainable forest management a general premise is that not everything can or should be governed at a global level. As such subsidiarity should be the leading principle in the decision-making processes within the multilateral system. The essential idea, being that processes should be managed at the level closest to where the problems in forest governance happen, implies that we have to differentiate between those issues that are managed at the global level (such as global goals and targets) and matters that should be managed at the national or local level. Lack of implementation, coordination, compliance, enforcement and effectiveness is a common problem in the international system (Najam, 2006). The crux of the challenge is that the system has been so frantically obsessed with negotiations which are more process than content related, that it has paid little attention to

implementation. There are also at least three key hurdles at the global level that have constrained the implementation on global forest issues: a lack of financial resources, a lack of adequate compliance and enforcement mechanisms, and sovereignty concerns.

Conclusions: A New Diplomacy for the Global Governance of Forests

This thesis has purposely sought to focus on the *global* governance of forests not simply because recent years have seen multiple efforts to find global governance solutions to forest challenges but, more importantly, because global decisions and structures have the ability to directly impact – negatively or positively – the direction of what happens locally. Bad decisions and inefficient institutions at the global level can not only distract from, they can actually impede, good efforts at the domestic and local levels (Banuri, et al., 2002). Conversely, good decisions and effective institutions at the global level have the potential to not just facilitate but propel good outcomes at the domestic and local level – the level where these outcomes mean the most (Banuri, et.al., 2002). This is so for most issues, and particularly so for the complex and interconnected challenges of sustainable development.

In the concluding part of the thesis, we consolidate this process by deriving some hypotheses about factors governing the likelihood of success in efforts to develop effective governance systems and applying these hypotheses, in a preliminary way, to the system of global forest governance. Based on the evidence from our analysis the response to our research questions is predicated on three key overarching propositions related to, respectively, the analytical framework, the policy response and the methodological approach relevant to the system of global forest governance.

➢ First, that with any given challenge, the complexity of the solution has to match the complexity of the problem. Global forest governance is a highly interlinked and complex system that is the sum of organizations, policy instruments, financing mechanisms, rules, procedures, and norms that regulate forest processes – and, on a broader level, sustainable development – at the global, national, and local levels. Our analysis indicates that more effective global forest governance will come not from addressing any one (or a few) of these elements, but from systematically tackling these myriad elements of global diplomacy and governance and, more importantly, the linkages between them. This makes the global governance of forests what social scientists call a 'wicked problem' (Rittel and Weber, 1973): a problem that is inherently complex and to which there are no simple solutions, because of complex interconnections. Solutions that seek to 'simplify' the problem by assuming away part of the complexity are doomed to failure because of the inherent complexity of the issues. Recognizing the ongoing desire of decision-makers for stability and simplification, an important conclusion of our research is the notion that complexity is here to stay and that it can be looked upon not necessarily as a constraint but possibly as a vehicle of progress that contributes to more effective governance systems (Teisman et.al., 2008).

➢ Our second proposition flows directly from the above and posits the need – indeed, the necessity – for a 'new diplomacy' that recognizes not only the inherent complexity of the issue but also the changed realities of global forest governance. Diplomacy provides us the context and the tools for global governance, including of sustainable development,

and within that context of the world's forests. However, as with a host of other issues, the nature of forest issues and its many complex inter-linkages to a whole host of other issues raises challenges for traditional practices of state diplomacy. At the same time, diplomacy itself has changed. Not only has the pace of international interaction increased on an increased number of issues, diplomatic 'actors' have themselves transformed. This reality of a complex issue and the dynamics of changing notions of diplomacy prompt the call for a 'new diplomacy' on global forests governance (Najam, Christopoulou and Moomaw, 2004).

➢ Finally, our third proposition is derived from our recognition that for a better understanding of the evolving system of global forest governance, or sustainable development diplomacy more broadly, the relationship between the parts must be studied, assuming that the relationships are mutual, emergent and dynamic (Teisman et.al., 2008). Such an integrated and evolutionary approach to governance increases our understanding of this system and thereby reducing the risks of a reductionist approach.

We acknowledge that our analysis of the evolving system of global forest governance is not sufficient, nor intended, to constitute a conclusive test of the hypotheses for the broader field of sustainable development diplomacy. Building upon the working assumption that the case study we have selected has been in place long enough to systematically analyze the critical determinants for the development of the system and its effectiveness, an inductive-deductive approach allows for the development and initial testing of a set of hypotheses which are distilled from the forest case study. Although the forest case study is sufficiently diverse to provide general preliminary insights into the various behavioral mechanisms for the field of sustainable development diplomacy as a whole, this case study must be seen as an intellectual springboard by which we attempt to trigger a line of analysis that could well result in the formulation of a research agenda for this newly emerging research field by probing the relevance of our hypotheses to actual behavior in related case studies within the broader field of sustainable development diplomacy.

In the context of these three overarching propositions and in response to the research questions, we have developed some initial hypotheses about the determinants of success in institutional bargaining and make use of these hypotheses, in a preliminary way, to illuminate the process of forming more effective governance systems for sustainable forest management. These hypotheses form the core of what a 'new diplomacy' might look like if it were to embrace the inherent complexity of global forest governance leading to enhanced governance capacity to deal effectively with complex problems. Building directly on the preceding discussion and in response to the overarching research question what we can learn about how the system of the diplomacy of global forest governance has evolved, we believe that there are at least six hypotheses that are central to devising a new approach, what we are calling the "new diplomacy for global forest governance". The points we raise here are especially pertinent in the context of forests, but they are not unique to the forest issue. Indeed, it is our contention that forests are not atypical at all. Instead, they are an exemplar of a new set of complex global problems (including, for example, climate change, global finance and food security) that are crying out for an alternative approach to diplomacy – one that

embraces the complexity of the problem, is not state-centric, involves a multitude of stakeholders, operates differently at different policy scales, and seek an array of appropriate toolkits rather than single solutions.

Hypothesis 1. Scale and Subsidiarity: Identification and attribution of the appropriate scale increases the probability of success of the system of global forest governance.

Based on the analysis in this study, we argue that global forest diplomacy has been too focused at the apex, or the global policy level, even when the issues of actual implementation are neither best understood nor best implemented at that level. From our case study we learned that UN headquarters discussions generally tend to operate in a particular logic of global inter-state politics. One where broad national interests define not just the language but also the substance of negotiations. One where issues get intertwined and subsumed within larger ongoing debates on delicate power dynamics, and one where national prestige and image can overwhelm the issue complexities and local realities that are triggered by those complexities. Forests and some forests stakeholders, particularly those with smaller voices, such as forest dependent communities, can often get subsumed in this operational logic. To increase the probability of success of the system of global forest governance, space needs also to be carved up for a more local discourse, for dealing with local and regional distinctions and nuances, and shared concerns and interests that do not cross normal global policy negotiation lines. It is important to note that our hypothesis does not imply to turn 'global' diplomacy into 'local' diplomacy. But it suggests that unless a space is carved out for accommodating and responding to the more local, domestic, and regional realities, the efficacy of the global thrust will be progressively diluted and could ultimately erode totally.

The recognition that not everything can be resolved from within the UN system implies two very important aspects in how a new model for global forest diplomacy might operate. First, it implies that while not *all* issues can be resolved from within the UN, some issues can – and, maybe, some issues can *only* be resolved from there. Secondly, it implies that a first step in the new global forest diplomacy should be to determine what the appropriate level of discourse and action is for which discussion (i.e., the principle of subsidiarity).

Hypothesis 2. Issues and Arenas: The development of institutional space for institutional interaction increases the probability of success of the evolving system of global forest governance.

Throughout this thesis we have demonstrated the notion that the 'system' of global forest diplomacy has been evolving with time. We have attempted to describe the dimensions of this evolution and argued that our inability to manage the emerging challenges of sustainable forest management is related to our inability to fully understand and keep up with this evolution and complexity. As a consequence, the tendency of decision-makers is to eliminate this complexity by defining narrow boundaries around these issues, such as forest carbon mitigation. Based on our analysis,

and following other scholarly work, we claim that the system of global forest governance has evolved into something far more complex than it was even until recently (Najam, Papa and Taiyab, 2006). Based on our findings we also believe that the evolution continues and is likely to continue.

Our study also highlighted that the proliferation of arenas where forest governance is being discussed, which is also part of this non-linear evolution, could itself lead to significant management problems. While multiple arenas do provide the ability to deal with different levels of the complexity at different forums, they also require a system of inter-arena coordination. It is important to note that our hypothesis does not imply to create management super-structures within which all the myriad initiatives are subsumed. Our research shows that a new diplomacy for global forest governance would require a more flexible institutional space where different institutions can network with each other without trigger 'turf' sensitivities of the key actors. Based on our analysis we argue that the most effective institutional body to provide this system synergy would be the UNFF. The Forum is already the *de facto* convening place of all policy discussions related to the world's forests. The UNFF can be the space where the system seeks to develop a common guidance on which direction the system moves and how different parts of the forests governance system interact. This would mean, however, that UNFF moves from trying to act like a negotiation forum to become a management forum. Our proposition is to make this convening function the UNFF's primary responsibility and providing it with the tools and incentives through which to succeed in this task.

Hypothesis 3. Actors: The probability of success of the system of global forest governance increases when deeper participation of all relevant stakeholders is ensured.

From our case study we learned there is no fixed content, nor is there a fixed set of actors operating within the system of global forest governance. For a global forest governance system to become more effective we assert that we need new and innovative ways of thinking about what 'participation' in global forest governance really means for different actors. Based on our findings a new diplomacy for improved global forest governance must begin to rearrange the notion of 'stakeholder participation' itself. There are strong practical and conceptual – even moral – reasons to want to involve all of them in the governance of the world's forests. But there is no reason - practical, conceptual, or moral - to assume that this means having to bring them all together in every global forum to ensure an effective system of global forest governance. A critical determinant for success, we believe, is to invest in a new diplomacy for global forest governance that allows multiple opportunities for multiple actors. Our proposition is not to exclude some actors from global diplomacy. At the same time, our analysis shows that we should depart from the widely shared notion that "all relevant stakeholders" should be involved. Rather, it is to expand our understanding of what participation in global governance means to include all the levels at which the implementation of global forest governance practically happens. Our approach is to expand not only the number of actors that are involved in global forest governance but also to expand the range of opportunities in which they can be meaningfully involved. At the same time, it is

critically important to be selective in determining which actors should be involved. Those actors who have a critical role and the governance capacity in the implementation of the global outcomes should have a seat at the table.

The interconnected nature of today's challenges resulted in suggestions for a coordinated response by a more coherent governance system. Coherence requires reasonable coordination and regular communication among organizations. However, it does not require a super-organization, nor does it require a central control mechanism to coordinate every action of every organization in the international system. Better policy coherence requires horizontal integration of global forest governance. First, our analysis indicates that there should be a commitment to deal with new issues in the most appropriate existing forums, rather than creating new instruments and institutions. Second, the current practice shows that each of the involved institutions has its own forest pogram. Often it leads to competition and turf wars within the UN system. This clearly shows the need for clustering or merging of secretariats of MEAs and departments of UN organizations and the forest arena should be encouraged to follow suit.

Hypothesis 4. Policy instrumentation: The fixation with one comprehensive agreement distracts attention from other avenues of the diplomacy of global forest governance that have a better potential for resolution and for implementation.

Among decision-makers there is an ongoing tendency towards creating stability and order in governance systems. Based on our research it is not a surprise that for nearly two decades now the international discourse on global forest management has been fixated on the x to negotiate an all-encompassing legally binding forest agreement. The fixation on a single solution – be it a framework convention or a global forest fund – has concentrated the attention on the process of negotiation, even when many commentators and practitioners alike have stated that it is unlikely that a meaningful single instrument can be negotiated (Humphreys, 2006). In the process, other global governance options for forests have either been ignored, or have received less attention than they deserved.

Based on our study there are at least three related reasons why, in the context of global forest governance, we claim that a single, universal "Global Forest Convention," per se, is not a critical determinant for success in terms of providing an effective system for global forest governance.

➢ First, from a practical perspective, it is clear – and has been for quite some time – that the political will and motivation for such a convention simply does not exist.

➢ Second, from a strategic perspective, the recurring rituals of discussing ideas about grand solutions like a comprehensive forest convention are not just a nuisance but an actual drag on the time and resources of those involved in global negotiations. *The fixation with a single agreement distracts attention from other avenues of global forest management that have a better potential for resolution and for implementation.*

➢ Finally, from a conceptual perspective, *it is no longer clear that a global forest*

convention (or a single fund) would be an effective tool, even if it were politically possible to attain agreement. The complexity of the issue and the myriad linkages to other challenging issues – for example, trade, climate change, biodiversity, etc. – militate against a single treaty solution and calls for a more nuanced set of cross-linkages with other issues and the conventions and treaties that govern them.

Our analysis shows that the international community need to build a response to the complexity of the issue that embraces that complexity and utilizes it to solve multiple problems. In forest issues, as in many other complex sustainable development issues, soft law has tended to produce hard results (Hoogeveen et.al., 2008). We claim that the fixation with searching for hard law solutions needs to be nuanced with a recognition that an array of soft law instruments might be more effective to a single comprehensive hard law instrument.

Hypothesis 5. Policy instrumentation: Portfolio Approach – The probability of success of the system of global forest governance rises when a portfolio approach is adopted.

Based on our analysis, the system of global forest governance will be more effective when it develops mechanisms that nurture, support, connect and coordinate global efforts. The challenge is not one of negotiating a new grand instrument, but of coordinating multiple existing and new initiatives. Such an approach will need to include innovative and sometimes untried mechanisms. It will also require adaptive governance in order to be flexible to adjust to our ever changing world, including new actors, contexts, and challenges (Boons et.al., 2008). To be effective, it must be performance based, requiring rigorous and constant assessment, and strong mechanisms of coordination and coherence between multiple instruments and institutions.

Based on our earlier research, such a 'Portfolio Approach' could consist of utilizing a combination of initiatives that can raise a variety of resources – including, monetary resources, knowledge resources, capacity development, public support, and awareness– for effective global action on forests (Hoogeveen et.al., 2008). Simply stated, the notion of a Portfolio Approach is that instead of selecting a single (or small) set of instruments, a portfolio of complimentary instruments be nurtured for raising the required support mechanisms (Hoogeveen et.al, 2008). Not all of the institutions and instruments in this architecture would be state-centered. In our study we have demonstrated that market instruments and civil society institutions are as central to the effective governance of our world's forests as state institutions.

Hypothesis 6. Leadership: A system of global forest governance cannot succeed in the absence of effective entrepreneurial leadership on the part of individuals.

Based on the evidence from our analysis we claim that a critical factor to develop an effective system of global forest governance is the emergence of one or more individuals as effective leaders in the process and, conversely, that in the absence of such leadership, they will fail. Especially in the twenty-first century leadership is needed that recognizes

the complexity of interconnected issues. In our experience we do not just refer to political leadership, but also to those who in the daily negotiations within the UN system can and are willing to show leadership. The complexity of the system not only asks for change in how we operate, but also a change in skills to make the system more effective.

Effective leadership requires a truly global and inclusive mindset to turn around the notions of traditional diplomacy on its head building upon the recognition that the complexity of our evolving and polycentric governance systems is here to stay. In this, the leadership required has to be bold and innovative enough because the long-term challenges of sustainable development are big enough.

It is clear that the traditional tools of diplomacy that we have applied and the system of governance we have tried to construct around the forest issue has not worked. It is not that the actors who have tried to solve the problem have not worked hard enough, nor that they have not come up with good ideas. It is, instead, that traditional tools of diplomacy that they have been applying ever so diligently are no longer the appropriate tools.

In our study we have tried to outline the overarching propositions of what we believe are the essential determinants of success of a new diplomacy for the global governance of forests. We envisage a diplomacy that is built around the premise that the complexity of the solutions has to match the complexity of the problem and that the inherent complexity of the forests problem has to be recognized and incorporated into any governance mechanism that is established.

During our study we have learned that there are many signs that a de facto new diplomacy is already beginning to emerge. Complex connections are beginning to be made. Innovations around actors and participation are being experimented with. Non-traditional instruments are emerging and the seeds of a portfolio approach have already been sowed. However, we recognize that all major systems are inherently resistant to change while forces of inertia seek to keep systems moving along familiar paths. As we have learned, the established system seeks to resist and reject attempts at change. Our research indicated the profound challenges of the current system of global forest diplomacy system while at the same time highlighted many experiments and efforts that are, in fact, moving in the right direction in terms of increasing the probability of successful implementation.

To the extent that the arguments sets forth in this study are convincing it should be apparent that we need to devote much more attention in the future to exploring the nature of sustainable development diplomacy. Although efforts have gone into the effectiveness of subcomponents of the system of global governance, or more precisely global forest governance, our understanding of the determinants of success of the effectiveness of the system as a whole is rudimentary at this stage. Nonetheless, the effort to improve knowledge of this complex subject is essential for those responsible for designing governance systems to cope with sustainable development challenges.

We hope that our study of this particular case study provided a useful first step as a

platform for future scholarly work on the effectiveness of sustainable development diplomacy.

Chapter 1

Introduction

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1.1 The Crisis of Multiple Crises

Since sustainable development entered the international agenda in the mid-eighties, sustainable development governance (SDG) has evolved rapidly. The system we have today reflects both the successes and failures of this process. There is growing awareness that the present system of development is rapidly and irreversibly eroding all three pillars of sustainable development: economic, social and environmental; and numerous international efforts have emerged to address these threats. The urgency, severity, complexity and global scale of the problems have outgrown the political institutions of governance, which are heavily constrained by competing interests of the parties, and by a set of operating principles that favors state interests over all other values. The international community has agreed that sustainable development should be the road all nations should travel. Yet governments and institutions are not yet capable of engaging in the diplomacy and creating the institutions of governance that are required to achieve the goals of well being for all citizens of the world within a supportive natural environment, and an equitable economy using effective social and governmental institutions.

The term Sustainable Development Governance(SDG) refers to the sum of organizations, policy instruments, financing mechanisms, rules, procedures, norms, that regulate the processes of sustainable development at the global, regional, national, and local level. Sustainable Development Diplomacy (SDD) is the tool, or the process, that is available to the international community to create an effective system of global sustainable development governance. The current governance system's high maintenance needs, its internal redundancies and its inherent inefficiencies, have combined to have the perverse effect of impeding the achievement of sustainable development worldwide (Najam et.al., 2006).

We acknowledge that the term crisis is often overused. However, the rapid rise of multiple, interconnected problems of major proportions defies a more modest name. The world in the beginning of the twenty-first century is faced with intensifying interconnected global and regional issues, such as political tension and uncertainty, economic and food crisis, climate change, water shortages, ecosystem disruptions, increasing social inequality and persistence poverty. The food riots in certain regions of the world in 2008 were manifestations of these trends that blur the boundaries between political, economic, agricultural, energy, trade, climate change, technology and other factors. How to feed the estimated 9 billion people in 2050 is one of the biggest challenges we face. The disjuncture between the global nature of the challenges and

the national centers of decision-making became more than ever clear (Weiss, 2009).

The rise in global temperatures may lead to irreversible and potentially catastrophic climate change (IPCC, 2007). The loss of species from a host of human activities is occurring at such a rate, that it is being called the sixth mass extinction by biologists (Wilson, 1988). Fisheries continue to collapse to the extent that three-fourths of all fisheries are at or beyond sustainable fishing limits, and coral reefs and mangrove forests that nurture marine life are dying (Wilkinson, 2008). Deadly air pollution dominates the air of many urban areas impacting the livelihoods of people (Hajer, 1995). Deforestation has accelerated, and with the loss of forests, the multiple environmental goods and services they provide are disappearing and the life of many is being degraded (Humphreys, 2006). We appear to be confronted with a crisis of multiple crises: an energy crisis, a food crisis, a climate change crisis, an ecological crisis and, more recently, also a financial crisis.

What is only now becoming apparent is that these individual large-scale crises are connected in complex ways, and our traditional approach to managing global and international problems is proving insufficient to the task. Forests, we will argue, are at the heart of sustainable development, and provide a useful lens for examining this new phenomenon of complexity and the need for a new approach for managing it. Forests are disappearing through deliberate actions by individuals, corporations and by governments. Sometimes this is done to increase land for agriculture or urbanization, but more often the harvesting of timber, clearing and the burning of forests is done to meet short-term economic gains (Chomitz, 2007).

The loss of forests is interconnected with many other issues in multiple ways. Forests are cut for economic development, especially agricultural development, in order to address poverty alleviation. The macro-economic benefits are mostly less than the loss of environmental goods and services (Richards and Jenkins, 2007). Forests are also lost because of a changing climate and from acid rain and air pollution. Deforestation of mangroves destroys the breeding grounds and nurseries for fish and other marine organisms and exacerbates fisheries decline. The loss of forests accelerates biodiversity loss of not only plants, but of many animal species, and increases soil erosion and flooding (Thompson, 2009). Livelihoods are lost when forests are replaced with less valuable land use patterns. Despite claims to the contrary, deforestation in most cases degrades human well-being, and retards development (World Bank, 2004).

To address the problem of forest loss and degradation requires a more comprehensive systems approach that sees forests in all of their complexity. The traditional debate over whether to protect or exploit forests is too simple a formulation of the problem. Forests, we will analyze in this thesis, are exemplars of the need for a transformation in SDD. The central role of forests in the sustainable development agenda makes them an ideal case with which to explore sustainable development diplomacy which includes issue identification, international negotiations and global governance.This study analyzes this broader issue of transformational change by examining forests and their relationship to the additional crises that the world is facing.

1.2 Historical Perspectives on Forests

Historically, forests have had dual hold on human imagination; both feared and loved. Folklore from societies around the world reveal a complex human relationship with forests, which were sometimes considered "cursed" and harbored "evil", while at other times provided "sanctuary" and resources for "survival".

> *"There was a quality of mystery about the wilderness, particularly at night, that triggered the imagination. To frightened eyes the limbs of trees became grotesque, leaping figures, and the wind sounded like a weird scream. The wild forest seemed animated. Fantastic creatures of every description were thought to lurk in its depths. Whether propitiated with sacrifices as deities or regarded as devils, these forest beings were feared." (Nash: 1967: 11).*

Folk stories from many cultures depict forests as dark, mysterious places where strange creatures lurk and unexplainable things happen. Early European folk belief was filled with demons, trolls, ogres and other mythical beasts that inhabited the forests, and many epics tell of these fearsome and repulsive forest creatures. In the tradition of Latin American mysticism, stories tell of strange, unexplainable things occurring in the depths of the region's tropical forests.

Early Europeans who came to the American forest found themselves in "a waste and howling wilderness." It was a dark forbidding place occupied by devils (Wigglesworth as quoted in Nash 1967: 36). Many saw it as their duty to God to replace the dark forest with the light of civilization - presumably by cutting down trees. It was the mission of mankind to have dominion over nature. Hence it is unsurprising that in both North and South America, grants of land by governments required that the owner "improve it" by clearing of forest, a practice that continues in some countries to this day.

Forests are also depicted in folklore and religion as a source of life and sustenance. More recently, forests and nature have taken on a more positive quality as revealing the mind of the Creator, and hence is deserving of protection. Ancient Egyptian mythology depicts the gods sitting in a sycamore fig; its fruits used to feed the blessed. The Egyptian Study of the Dead goes on to say that twin sycamore figs stood at the eastern gate of heaven. In some Eastern cultures, forests and wilderness were venerated as the symbol and essence of the deity (Nash 1967). "In Japan the first religion, Shinto, was a form of nature worship that deified mountains, forests, storms, and torrents…" (Nash 1967: 20).

Indigenous traditions around the world also have a dual perspective on forests, seeing forests both for as a source of resources and danger. On the Kii Peninsula in Japan, inhabitants rely on the forests for survival, but they also see danger in taking of the lives of plants and animals. They believed that when the rules of nature are infringed, tatari – "a curse or retribution in the form of illness, death, personal misfortune or some other calamity" – occurred (Nash 1967: 28).

In Central Africa, indigenous peoples have lived successfully in the tropical rainforest

for thousands of years. Some tribes are typically short in stature, and historically there have been contrasting views of these people as "noble, egalitarian forest dwarfs or fierce, unruly savages who are embarrassing throwbacks to an earlier stage of human evolution" (Bailey et.al., 1992: 204). Living in small, distinct ethnic groups, many tribes depend on forest resources for their own subsistence as well as for goods to trade with nearby agricultural tribes. They fish in the rivers, they hunt antelope and monkeys, and they gather nuts, fruits, and honey to supplement their diet.

Central Africa is far from the only region that had indigenous peoples occupy forests historically and still have them present today. In South America many tribes of indigenous peoples live in the vast Amazon basin, in New Zealand the Maori tribes are still present, and in India, tribes including the Nishi occupy Arunachal Pradesh and other parts of India. Like the African pygmies, many indigenous peoples depend on forests for food sustenance, wood, and building materials. Furthermore, populations living on the fringes of forests gather medicinal herbs, firewood, and such items to supplement their agricultural commodities (Colchester, 2008).

The stark dualism between love and fear of forests that was present on and off throughout history diminished as innovation and confidence evolved and allowed humans to exercise more control over forests and their natural resources. In many parts of the world, man's relationship with forests shifted from one that balanced fear and respect to one that emphasized human domination over forests (Scott, 1998).

The Industrial Revolution of the late 18TH and early 19TH centuries brought new, greater demands of forest products for consumption, energy generation, and construction. As the demand for forest resources outpaced supply from European resources, Britain, amongst other European countries, turned to other parts of the world for these resources, including the United States and India. Timber from these and other parts of the world were used to fuel the British industrial revolution along with coal, erect cities, and build their naval fleet. It also helped Britain build the largest naval fleet in the world. In the United States, pioneers cleared forested lands for agricultural production and timber extraction, pushed by westward expansion and a booming population. Forests cover an estimated 28% less area today in the U.S. than at the time of European settlement (FAO, 2007). During this period, forested land was lost to human consumption. Forest resources played a critical role in the development of the United States, Britain, Germany, and other European nations, fueling their rise as world powers. This period marked an important stage in the evolution of forests as a key policy issue – forests for development – a policy issue that would reemerge many decades later in concerns of developing nations.

By the early 20TH century, forest resources across Europe, North America, and in other parts of the world, were declining. Timber extraction, agricultural and infrastructure expansion, population growth, recreational use, and increasing demands for forest animal and plant resources, were all putting stress on tropical, temperate, and boreal forests throughout the world (Geist and Lambin, 2002).

1.3 Forest Decline

Humans have been converting forested lands to other uses such as agricultural and urbanization since before the industrial revolution. The lands of Europe were being cleared soon after the 11th century, and Europeans began clearing the Americas by the 17th century with the greatest decreases occurring in the 19th century. Indigenous peoples also managed some forests in the Americas prior to European settlement through the use of fire, but did relatively little clearing of forested lands. The recent large scale deforestation in Africa, Asia and Latin America has occurred mostly since the mid-twentieth century. As can be seen in Figure 1.1, the decline in forest cover from approximately the year 1000 until 2006 is significant. Heightened political and societal interest has led to the increase in monitoring of forest resources and deforestation rates. From 1990 to 2005, forests declined by 3%, resulting in a total area just under 4 billion hectares globally by 2005. While they compose roughly 30% of earth's terrestrial land area, deforestation continues. The current deforestation rate of 13 million hectares/year is partially offset by tree plantings, and lands abandoned to forest recovery resulting in a net forest loss of 7.3 million hectares per year, or 20,000 hectares per day (FAO, 2007).

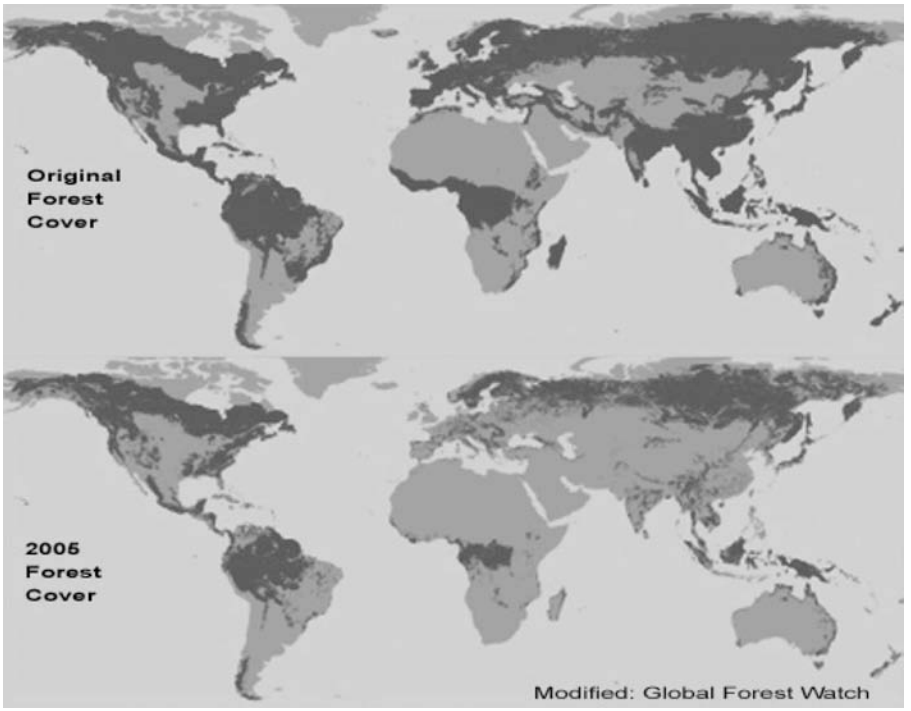

Figure 1.1 Change in global forest cover from approximately the year 1000 to 2005 (World Bank, 2008)

The productive use of forests is dominated by wood production. Over 50% of forests were designated for wood production in their management objectives (as of 2005), some of which was included in a 'multiple purpose' designation, and the countries with the largest forested area grew the largest total stock for wood production (FAO, 2007). The shift towards sourcing more wood from plantations rather than natural forests is seen by the increase in productive forest plantations by 2.5 million hectares from 2000 to

2005 (FAO, 2005). Figure 1.2 shows the primary designated functions of forests as they were in 2005 (FAO, 2007).

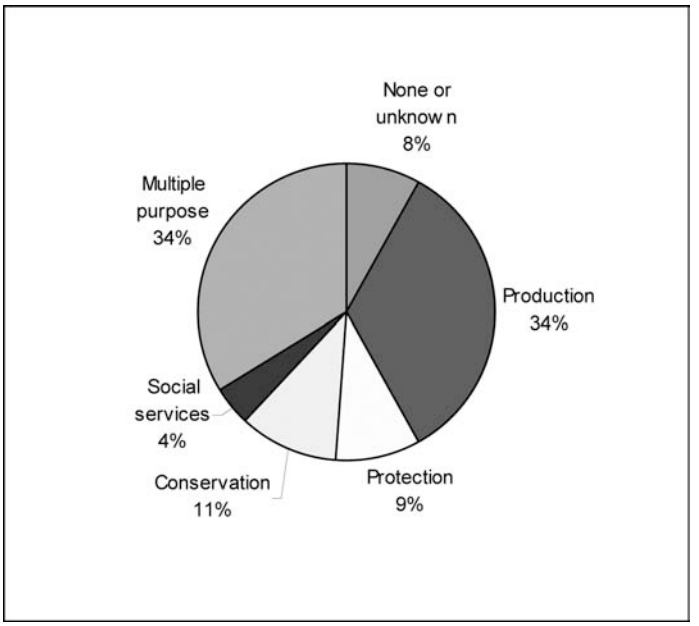

Figure 1.2 Designated primary functions of forests, 2005 (data from FAO, 2007)

Protection and conservation of biological diversity together are the primary forest function in 20% of the world's forests. Furthermore, 4% of forests are used for social services, including recreation, education, and tourism. The area protected for conservation purposes was 32% greater in 2005 than in 1990 (FAO, 2007). This shows the prominence that biodiversity conservation and valuing of forest resources have gained over time. As far as the indicators of biodiversity, the presence of primary or frontier forests and the number of threatened or endangered species are the most common indicators. While there is insufficient data globally to determine the number of threatened or endangered species, tropical primary forests have the highest biodiversity and can be used as a proxy. However, every year 6 million hectares of primary forests are lost or modified, and within the five years from 2000 to 2005, the countries that converted the most were Indonesia with 13% loss, Mexico with 6%, Papua New Guinea with 5%, and Brazil with 4% (FAO, 2007).

Throughout the world, forty-three countries still have over half of their land forested (FAO, 2007). When global forests are aggregated, merely five countries hold over half of the world's forested area – the Russian Federation, Brazil, Canada, the U.S., and China. There is considerable variation in forest policy throughout the world, especially considering the general trend toward devolution, shifting governance from the national to local level. Most forested lands remain in public hands; however, some countries embarked on greater privatization. The State of the World's Forests 2007 recognized that some regions are responding more effectively to halting deforestation than others,

balancing the environmental impact with economic gain and livelihoods impacts, but each faces its own challenges (FAO, 2007).

Although Europe is the leader in sustainable forest management today with examples of forests that have been managed productively for centuries, economic development and industrialization over several hundred years greatly depleted Europe's forests. As population grew and farming methods changed, significant areas of forest were lost to livestock grazing, swidden cultivation and clearance for permanent fields. Remaining areas were subject to intensive logging to meet the needs of local populations and for industries such as shipbuilding, construction, charcoal production and mining. Only about 0.24 % of Europe's remaining 144 million hectares of forest is considered to be virgin forest and only 1.8 per cent is classified as virgin forest or old growth forest remnants (Colchester, 1998). The European forestry sector, however, is declining on the whole, and concerns have surfaced over how that effects climate change, especially precipitation patterns in this and other parts of the world.

So, until very recently, deforestation made economic sense for most developed countries, and state policies and processes supported the land use changes from forest to agriculture and urban development to meet the needs of a growing population. In seeking to help reduce deforestation in tropical forest nations, developed countries can therefore be seen as asking developing countries to reject a high-deforestation (and consequently high-carbon) growth path that they themselves have followed (Eliasch Review, 2008).

North America still has abundant forest resources with forests covering 33% of the land area. Forest area is constant in the U.S. and Canada, and while Mexico loses about 0.5% per year, the rate of depletion is decreasing. Canada and the U.S. have a strong forest industry; including Mexico, the region accounts for 40% of the world's wood removals. The rate of removal is declining in the U.S., the largest producer, but growing demand caused it to shift from a net exporter of forest products to a net importer. In regards to sustainable forest management, there are progressive policies that engage both private sector use and public controls in all three countries (FAO, 2007).

Asia and the Pacific is a mixed story, characterized primarily by rapid economic growth. Domestic and international demand for timber and for palm oil, minerals, oil and gas is leading to significant deforestation in some countries and extensive illegal logging is occurring in others. China on the other hand is planting large forest plantations and has actually increased its forested area since 2000. Overall, China and a few other countries following the same strategy tip the overall rate of forest change to a net positive number for the region (FAO, 2007).

Not all regions of the world are moving in this direction, however. From 1990 to 2005, deforestation removed 19% of forest cover in Central America and 7% in South America. However, Caribbean nations have increased their forests by 11%. Latin America with 54% of the world's primary forests and high biodiversity, has seen its forests decline in area due to a range of underlying causes. The high conversion rate of forested land to agriculture is the leading cause of deforestation for the region as a whole. The region composes only 7% of the global forest sector's value, even though it covers over 20% of

global forest area, partly because Central America and the Caribbean use the majority of their wood removals for fuel. Several governments are making greater efforts to conserve land and strengthen institutions to manage forests more sustainably, although finding financial resources is a constraining factor (FAO, 2007).

Africa joins Latin America as the regions with the highest rates of forest depletion. Africa lost more than 9% of its forests from 1990 to 2005. Conflict and rampant wildfires ravage the land, and fuel wood collection has increased steadily since 1990. While national political actions have designated more conservation areas, many governments lack the resources to protect these areas once they are designated.

A summary of total forested areas and trends by region is provided in Table 1.1.

Region/sub-region	Forest area ('000 hectores	% of land area	Net change, 2000–05	
			('000 hectores)	%
Eastern and Southern Africa	226 534	27.8	-1 702	-0.74
Northern Africa	131 048	8.6	-982	-0.73
Western and Central Africa	227 829	44.1	-1 356	-0.48
Total Africa	635 412	21.4	-4 040	-0.62
East Asia	244 862	21.3	3 840	1.65
South and Southeast Asia	283 127	33.4	-2 851	-0.98
Western and Central Asia	43 588	4	14	0.03
Total Asia	571 577	18.5	1 003	0.18
Total Europe	1 001 394	44.3	661	0.07
Caribbean	5 974	26.1	54	0.92
Central America	22 411	43.9	-285	-1.23
North America	677 464	32.7	-101	-0.01
Total North and Central America	705 849	32.9	-333	-0.05
Total Oceania	206 254	24.3	-356	-0.17
Total South America	831 540	47.7	-4 251	-0.50
World	**3 952 025**	**30.3**	**-7 317**	**-0.18**

Table 1.1 Global forest and percentage cover, 2005, and net changes by sub-region, 2000-2005

Note: Percentages represent the proportion of remaining forest area lost and/or gained each year during the respective period. Source: CPF, 2008

1.4 Multiple Dimensions of Forests

Forests can be interpreted in multiple dimensions: economic, social-cultural and ecological. Forests contribute to the livelihoods of more than 1.6 billion people. Forests and the forest products industry are a source of economic growth and employment. Worldwide, forest industries provide employment (both formal and informal) for approximately 50 million people (World Bank, 2004).

Forests are home to at least 80 percent of the world's remaining terrestrial biodiversity and are a major carbon sink regulating global climate change. Forests also help to maintain the fertility of the soil, protect watersheds, and reduce the risk of natural disasters, such as floods and landslides (World Bank, 2008). Commercial markets rarely capture the full value of these ecosystem services, and even if they do recognize that the services exist, the difficulties associated with quantification make them hard to include (PROFOR, 2007). Acknowledging the inherent complexity of valuation, one study attempted to quantify the economic value of the world's ecosystem services. It estimated the values for these services per unit area depending on the biome. Then it multiplied that number by the total area of each biome, and then summed over all services and biomes. It found the global annual average of ecosystem services to be US$11 – 54 trillion, with an average of US$ 33 trillion (in 1994 US$). Broken down into marine and terrestrial ecosystems, it analyzed nine terrestrial biomes, one of which was forests. Forests alone accounted for US$4.7 trillion per year. For the 17 ecosystem services identified, some benefits are realized indirectly, such as biological control of pests, transient populations, or genetic resources, while other benefits are obtained more directly from recreation or disturbance regulation, including protection from floods and droughts. Forests produce organic matter that forms soil over time, and trees anchor the soil and help with control of erosion and sediment retention. Ecosystem services cover a broad range, and without forests and these services, the "economies of the Earth would grind to a halt" (Constanza, 1997: 253).

Figure 1.3 presents a stylized view of forests, land use, and their link to climate change.

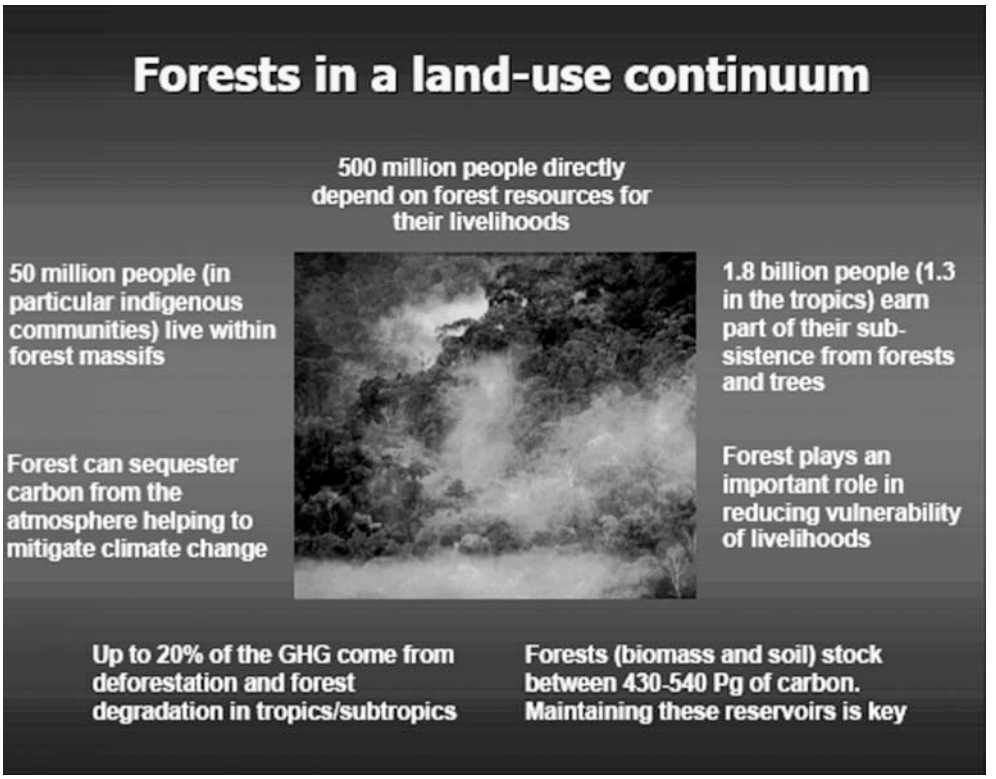

Figure 1.3 Forests in a land- use continuum

Source: Blaser and Robledo 2008.

1.5 Issues Confronting Forests

While forests are vital to human societies, they are also exposed to a range of anthropogenic challenges to continue to survive. As humans use forests and their products, they potentially impact natural processes. Forests adapt to some changes, but other stresses are too rapid or difficult to overcome.

While this study emphasizes the complexity of forest linkages and the implications for global forest governance and its diplomacy, not about the causes of deforestation and forest degradation, it is important to have a firm grasp on the latter. The breadth of the causes underscores the complexity of the problem and has significant implications for our analysis and the way forward. A range of cultural, social, economic, and political factors result in differences and a unique combination of challenges for each forest. Distinct views on forests, pressures, and incentives to either deforest or protect them result in different patterns region to region, and even within regions.

Figure 1.4 aggregates the direct causes of changes in forest area according to developing country region. It is clear that there is no single cause for deforestation, and that the underlying causes vary considerably among regions (FAO, 2005).

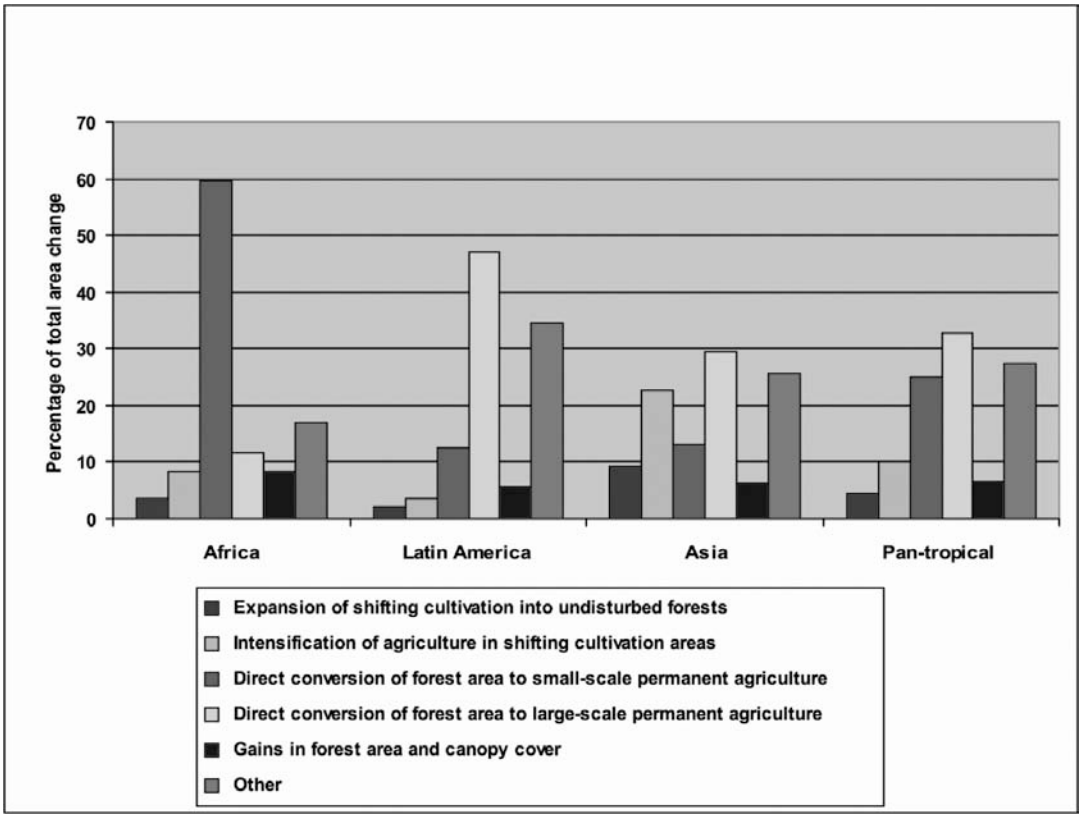

Figure 1.4 Direct causes of changes in forest area, by region, 1990–2000

Source: FAO, 2005

Illustrated in a different manner, the forest transition theory describes the aggregate impact of drivers of deforestation as a sequence over time and suggests that large areas of forests will be lost unless there are policy interventions. The curve starts with a set of triggers that initiate deforestation, such as road construction, and then the effect is amplified by reinforcing loops. This positive feedback is usually attributable to population or economic growth in the area that causes agriculture and development and which can be facilitated by such indirect factors as commodity prices. The final stage on the curve is where stabilizing loops create downward pressure on agricultural rent, stemming from better employment opportunities in cities or lower commodity prices. At the same time, scarcity of forest resources can also lead to an increase in forest rents, which encourages better forest management. While there are certainly many variations, the forest transition curve presents a common progression of deforestation driven by economic development (Eliasch Review, 2008).

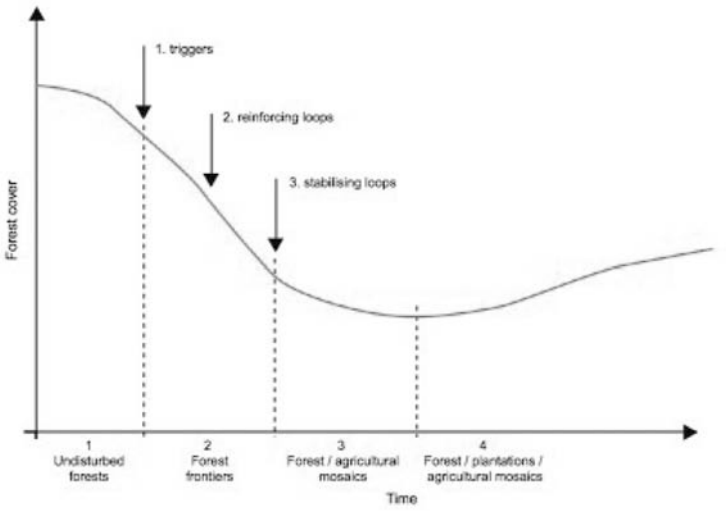

Figure 1.5 Forest transition curve

Source: Eliasch Review, 2008

On top of anthropogenic pressures, a natural phenomenon that will confront all forests in upcoming years, and that is already impacting many forests today, is climate change (IUFRO, 2009). As will be examined in more detail in chapter 3, changing precipitation and temperature patterns are forcing trees, plants, and organisms to adapt to new conditions. The timing of flowering for plants and animal lifecycles are often triggered by temperature; however temperature changes can disrupt the synchronization between certain plants and organisms that are dependent upon each other. Additionally, some animals and plants are migrating northward and upward in elevation, changing ecosystem composition. Climate change presents a universal challenge facing forests, although it will be manifested differently in each location. The mountain pine beetle of western North America shows the devastation that can be caused by large-scale outbreaks that are often characteristic of warmer winters. A recent outbreak, which started in 1994 and accelerated since 2000, has already destroyed over 170 million m3 of timber (CPF, 2008).

1.6 Governance

Up until the 1990s, forests were predominantly governed on the national scale. Governments typically viewed forests as natural resources to be used for national development. The wide variety of viewpoints on forests and issues faced has led to diverse approaches to governance. Policies were often implemented to strategically use forested areas for economic growth through logging, agriculture, and mineral or oil extraction.

At times, the multiplicity of actors has led to the question of what is the most effective scale for forest governance. Given the pressures that occur locally the question occurs whether governance should be decentralized to the local level. One argument suggests that local or regional enforcement could more effectively combat illegal activities since

it is arguably more attuned with the circumstances, actors, and the landscape of a specific location (Christy et.al., 2007). At the same time, there are global impacts that result from local forest land-use decisions. People beyond the forest boundaries or outside of national borders need many of the vital ecosystem services provided by forests. That is in part why the global community became concerned with deforestation and came together to discuss the issue. The international level adds another layer of complexity and brings in new and additional actors. New perspectives and cultural understandings add competing rationalities to the decision-making process (Litfin, 1994). The rise of new modes governance in forest-related practice highlights the influence of discourses between societal, economic and state actors as well as the influence of expertise as important sources of knowledge for political actors and their decisions (Boecher et.al., 2009). Globalization and economic integration connect the world and blur state lines more than was the case historically (Stiglitz, 2002).

In other words, the issue of scale is not as simple as determining whether to address forest issues on the local, national, or global level. The question is whether the scale of the causes of deforestation should determine the scale of governance. Another approach to determine the scale of governance could be to examine the population impacted by forest policy. Under this assumption, should local populations that are impacted by changes in hydrological services take precedence or the international community that is affected by the loss in biodiversity from deforestation? Or perhaps rather than determine the scale of governance by the scale of the causal factors or the people affected by deforestation, the effectiveness of each scale of governance could be selected as the criterion. Beyond the scale on which decision-making occurs, there is the scale at which policy implementation and enforcement are pursued.

In this thesis we take as point of analytical departure the notion that scale matters. Governance on each scale has strengths and weaknesses in each of these deforestation causal factors depending on the issues addressed, actors, and instruments for sustainable forest management.

Due to the vast differences in the ways that people view forests, the ways that they govern those resources has varied widely as well. We will examine in our study how the issues have grown in complexity and the actors and instruments of governance multiplied. We will also analyze how the system of global forest governance (GFG) has begun to reflect some of the challenges facing global governance on a broader scale. Adding to the national governments that first had the responsibility for forest governance, intergovernmental organizations, corporations, community groups, and academia are also actors in the current system of forest governance. With different associations and viewpoints on forests, there are more competing claims and voices in the governing process. For purposes of this study, the term "global governance" refers to "the sum of efforts to manage global processes in the absence of a global government" (Najam et al, 2006). Thus, global governance includes organizations, policy instruments, financing mechanisms, rules, procedures and norms that regulate the global system.

Many commentators have stated that global governance in general has become much more complex over the past 30 years (Najam et.al., 2004). This complexity is a result of the interaction and negotiation processes between different actors, whose resources

are indispensable for a joint undertaking (Teisman, 2000). The governance of certain issues, which once seemed precise, is no longer so. In addition to global forest governance, on which we will focus this study, this can be seen in other arenas, such as trade, development, environment, and intellectual property. While the General Agreement on Tariffs and Trade focused on lowering tariff rates on goods traded between countries, its successor, the World Trade Organization (WTO) and many regional and bilateral trade agreements has incorporated regulations on trade in services, foreign investment, and intellectual property rights, not to mention labor and the environment. There does not appear to be any overarching system within WTO or other trade regimes that deals with trade in timber, pulp or other forest products that were acquired in violation of either national laws or international treaties. This is a serious problem that needs to be addressed. The United Nations Development Programme (UNDP) was formed to address issues of democratic governance and poverty reduction, and today it dabbles in a much broader range of issues including arms proliferation, environmental protection and energy. Likewise, bilateral investment treaties formerly acted as the primary instrument for countries to protect their companies overseas. Since the mid-1990s, however, investment provisions have begun to be incorporated as a natural part of trade agreements.

Just as the issues have diversified, so have actors and the instruments of global governance. States historically acted primarily to regulate the use of forest resources, a role they played in many arenas. Globally, however, we have moved away from states being the only actors on the international stage (Porter et.al., 2000). Intergovernmental organizations, international and national civil society organizations, and multinational corporations, academia, and public concern and action have stepped in to play a role in global governance as well. Each of those actors bring with them different goals and a diversity of interests. Different actors have made room for different instruments of governance – from enforceable international agreements with dispute resolution systems, to purchase and sale agreements recording transnational business transactions. This multiplicity of governance actors must cope, amongst others, with the multiple voices of millions of local decision makers, the chaos of war and domestic conflict and the destruction brought by organized crime and corruption. Against this background of the development of global governance more broadly we conduct our analysis of the case study on the system of global forest governance and its diplomacy.

1.7 Research Questions

This study builds on the premise that the goal of the international community has been to create an effective system of global sustainable development governance, including effective forest governance. Diplomacy is the tool, or the process, that is available to the international community to do so. In this study we will analyze why the international community has not succeeded in creating effective systems of global forest governance. Governance systems are assumed to be complex by definition (Hoogeveen et.al., 2008, Teisman et.al., 2008). These processes are the coordinated actions of public and private actors around collective issues (Boons et.al., 2008). We accept as a basic assumption that due to the diversity of issues, actors and instruments, the complexity

of global governance, and, in particular, global forest governance has increased. Different issues require different solutions. Actors come with various goals and interests, and instruments of governance bind actors to varying degrees and in diverse ways. Although complexity is not, in and of itself, a negative characteristic, it may create a set of challenges for the system of global forest governance, making it, amongst others, more difficult to accomplish a coherent set of goals on forests. The question is whether the system of global forest governance is equipped to address this complexity and if not, how this complexity should be addressed. In this, we claim that a reductionist approach exclusively focusing on the parts of the system does not generate an understanding of the system as a whole.

This study examines the principal challenges of global forest governance and its diplomacy. The goal is to expand our understanding of the system of global forest governance and its underlying patterns. It builds on the working assumption that a de facto "system" of global forest governance already exists. In this, we define a system as the emerging interactions between the elements of the system that generate the outcome of governance processes (Boons et.al., 2008). We accept that the de facto system is neither neat nor simple and works in a rather non-linear, non-hierarchical, and intertwined fashion (Najam et.al., 2004). We accept that complex governance systems, such as our case study, must be analyzed by studying their parts as well as the emergent patterns that result from their coevolution (Teisman et.al, 2008: 5). Within these complex systems, processes evolve through interactions between their constituting elements, actors and content. Our point of analytical departure starts from the empirical observation that governance systems and networks are often in states of change which make them difficult to analyze, let alone manage.

The overarching research question is what we can learn about how the system of the diplomacy of global forest governance evolves by analyzing the components of the system in an integrated way. Is the current multi-dimensional process of sustainable development governance and its diplomacy evolving in a manner that it can achieve the agreed goals, objectives and targets, such as those agreed within the realm of global forest governance? Based on this research we will demonstrate that a type of new diplomacy is required to create a more effective system of global sustainable development governance, including global forest governance.

The search for an answer to this question raises a series of more focused questions around three interrelated focal areas encompassing the system of global forest governance: issues, actors and institutions and policy instrumentation. These questions are embedded into the broader debate on what the drivers of societal change are on decision-making of predominantly centralized, top-down and vertical steering processes at the global level.

Single issue management versus issue linkages – This research aspect examines the influence of fragmentation among policies that affect forests. Forests are dealt with in conjunction with a series of other issues, such as climate, biodiversity, trade, agriculture, development and local property rights. Because of the complexity and interconnectivity of issues related to forests, different actors tend to conceive of forests in relation to their own interests and narrow perspectives. The complexity challenges

of the current system of global forest governance often takes a "siloed" view of forest issues. Simplification does not work when adjustments in one area create imbalances in others. The question is how to manage this complexity, rather than eliminate it, and how to imply a coherent approach to the broad ranging issues therein.

Actor Complexity – This research seeks to make sense of the complexity of the actors in the system of global forest governance. GFG involves numerous types of actors, from global multilateral institutions to national governments to village councils, and from large international timber companies to small producers dependent on forest products for their livelihoods, and all manner of civil society organizations (CSOs) at every level. Each of these types of actors has very different, and often contradictory, interests and priorities in relation to forests. None of these actors have the right or the capability to unilaterally set global forest policy.

The question is not only to demonstrate the variety of actors involved in global forest governance, but also to highlight the complications that arise because of the variety and how those complications impact the efficacy of global forest governance. In order to do so we attempt to make sense of and deal with this complexity and identify critical determinants for making the system more effective.

Forest Policy Instrumentation – The multiplicity of issues and actors related to forests has led to myriad governance mechanisms and diverse approaches to the implementation and enforcement of sustainable forest management. Political decisions are being negotiated in new arenas, between state and non-state actors, and new modes of governance are developed which depart from conventional hierarchical top-down regulation using regulations and directives. More than ever the question arises around the effective scale of the governance response, including the role and impact of the subsidiarity principle. This research aspect analyzes how the complex sets of instruments and approaches within the system of global forest governance interact and how this interaction impacts the effectiveness of the system and its efficiency.

The emphasis of this study is to identify the factors that make the system of global forest governance and its diplomacy more or less effective as mechanisms for altering the behavior of actors in international society and, in the process, for solving or alleviating a variety of problems, including through addressing the underlying causes of deforestation and degradation.

Although we are aware of the broader scholarly debate, we accept as the relevant test for discerning an impact of this type is whether the system affects the management of the problem that motivated its creation by inducing changes in the behavior of states and other actors whose behavior is directly involved in the relevant behavioral complex. Our working assumption is that a system of global forest governance that channels behavior in such a way as to eliminate or substantially ameliorate the problem that led to its creation is an effective system. A system that has marginal behavioral impact, by contrast, is an ineffective system. This assumption implies, of course, that the concept of effectiveness as applied to the system of global forest governance defines a continuous variable. The system can range along a continuum from ineffectual arrangements, which wind up as dead letters, to highly effective arrangements, which produce quick

and decisive solutions to the problem at hand (Young, 1994).

We acknowledge that there is no simple test available to gauge the proportion of the variance that can be explained by the presence and operation of the factors that determine the system of global forest governance. We also accept that determinants for success are obscured by numerous connections with other elements. That said, however, analytical tools do exist that are useful in constructing persuasive arguments about the working of the system of global forest governance.

In our study we claim that the case study we have chosen for in-depth study in our analysis – the system of the diplomacy of global forest governance – has been in place long enough to compile track records that can be evaluated systematically. A central component of the case study, then, consists of a causal narrative that details the effects produced by the system of global forest governance and seeks to identify causal connections between the relevant behavior and the operation of the system. Causality will not be interpreted in this study in the pure positivist sense but much more for patterns within the complex system of global forest governance and the resulting dynamics.

This study makes use of an inductive approach seeking to infer a set of theoretical derived hypotheses against evidence distilled from our case study on the development of the system of global forest governance and its effectiveness. Subsequently, based on the evidence from our analysis and in response to the research questions we provide a tentative validation of the hypotheses through a deductive approach. We are concerned with identifying behavioral pathways and exploring how they work in practice rather than with establishing the relative significance of different pathways in some global sense. Nonetheless, we acknowledge that we cannot ignore the question of the extent to which our case study is representative of some larger domain within the broader field of sustainable development diplomacy. We believe our case study is sufficiently diverse to provide insights into the nature of the various behavioral mechanisms and the conditions under which they operate relevant for the broader system of sustainable development governance and diplomacy. Based on our practical experience in the governance and diplomacy of a range of other complex global public good issues, such as biodiversity, fisheries, agriculture, and climate change, we expect our findings have relevance in these domains as well. From a theoretical perspective future research on other case studies within the domain of sustainable development should be developed as vehicles for probing the relevance of our model to actual behavior governed by the broader system of sustainable development diplomacy.

1.8 Study Outline

The challenges global forest governance and diplomacy face require greater examination in order to move forward. Global forests negotiations have proceeded over the past few decades, and throughout this time knowledgeable observers and practitioners believed that a legally-binding agreement would be impossible to achieve because of the vast geopolitical interests and the initial positions of the negotiating parties were so widely divergent. The split between developed and developing countries, the debate on a formal treaty or a non-legally binding treaty, and the disagreement over a funding

mechanism polarized the negotiations. Finally, after many years of disagreement, UNFF-7 reached a successful agreement with the adoption of the global forest instrument (Ban Ki Moon, 2009).

This study focuses on the system of global forest governance and diplomacy, working on the premise that the processes we use to negotiate global agreements are as important as the technical capabilities and the scientific understanding that the negotiators bring to the bargaining table.

In sum, this study seeks to do three things.

First, it analyzes the politics, economics and policy response to global deforestation and forest degradation over the past 30 years. It describes the need for a new global system to address forest loss and it introduces the complex and fragmented institutional configuration of international forest policy. A whole array of forest-related organizations, instruments and institutions that have developed over recent decades will be analyzed of which the sum epitomizes a subset of an emergent system of global sustainable development governance and diplomacy.

Second, it analyzes and explains the driving social and economic forces in determining success and failure in efforts to form the international instrument on all types of forests and in shaping the substantive content of it. The forest negotiations will be used as a case study to examine the strengths and shortcomings of the existing environmental treaty-making system and the scholarly work analyzing this system.

Third, it attempts to identify lessons learned and to develop a range of recommendations building upon the analysis of international forest diplomacy aimed at overcoming the weaknesses of international environmental negotiations while capitalizing on the lessons learned and best practices of UNFF (Maini, 2004).

Acknowledging the existing system

As a starting point, we recognize the diversification of actors, issues, and instruments in global governance gets us to our point of analytical departure: that a de facto "system" of global governance already exists. And it exists in a plethora of international arenas and fields, of which forests is only one. In the arena of trade, governance occurs through multilateral negotiations and agreements under the umbrella of the WTO (Najam.et.al., 2006). Bilateral and regional negotiations take place outside the WTO to form trade alliances that go deeper and broader than is feasible on the multilateral stage. States negotiate with foreign companies to encourage trade and investment. Private multinational companies engage in a governance role by entering into contracts with each other, supplying goods and services all over the world. In recent years, civil society organizations (CSOs) have begun to play a larger role by informing the process of trade negotiations and international trade relationships (Wapner, 1996). This was made evident at the 1999 World Trade Organization meetings in Seattle, where international CSOs put significant pressure on corporations for responsibility in labor and environmental practices.

In the arena of environmental protection, environmental standards have formed

through specific environmental organizations, more general related organizations such as the UNDP and even the WTO. Local non-state civil society and private actors have had probably the largest impact on environmental governance by generating agendas, creating knowledge, and monitoring intelligence on the state of global environmental governance (Banuri and Najam, 2002). More generally, public concern and action have shaped global environmental governance by triggering domestic political pressure which, in turn, can dictate the behavior of international organizations. Consumer activism in the form of product boycotts, product preference, and others can act as de facto standard setting (Najam et.al., 2004).

By acknowledging the existing system, we claim that reform of the system cannot fail to take into consideration this existing structure of governance. This is particularly important in the arena of global forest governance, where issues, actors, and instruments have been around for decades, and in some cases, for centuries. Just like the diverse arenas of trade, intellectual property, and environmental protection, as global forest governance has evolved, epistemic communities have developed around it. There are communities of loggers and scientific foresters, of multinational lumber companies, of forest dwellers, of policy analysts and negotiators, and of environmental activists, among many others. And each of these communities contributes to global forest governance by bringing its own needs, goals, and history. The de facto system of global forest governance is made up of various issues, a mosaic of actors, and diverse instruments that govern how forests are used, treated, and sustained. As we move forward to suggest reforms to global forest governance based on our analysis of critical determinants for an effective system, we will build upon the current system as it has evolved. Beginning from scratch, we accept, is not an option. But acknowledging the existing system also forces us to deal with challenges that face global forest governance, some of which are unique to the forest arena, while others confront all global governance.

To fully establish the base understanding of the de facto system of global forest governance, Chapter 2 lays out the groundwork. Global forest governance is deeply integrated with sustainable development governance, so this chapter sets out to describe the evolving concept of sustainable development governance and analyzes the challenges of the emergent sustainable development governance system. Building upon this and using a similar framework, we then focus on global forest governance and its diplomacy. First we explain its progression thus far and how the dominant ideas and policy actions have evolved since the 1980s. Then, we turn to the overarching challenges the system of global forest governance faces.

The main thrust of the study analyzes global forest governance along three interrelated domains: according to issues, actors, and instruments. Through Chapter 3, the issue-linkages between forests and other sectors are identified. Several sectors interact with and influence forests, and yet view forests through their issue-specific lenses rather than as an integrated system. On the reverse side, it is difficult for global forest governance to effectively govern forests without understanding how other sectors already are dealing with them.

Chapter 4 moves into an analysis of the actors within the system of global forest governance. It points out nuanced distinctions within three main types of actors: state actors, market actors, and civil society actors. Trying not to oversimplify, but rather to understand the complexity, this chapter looks at how the actors interact and affect global forest governance.

Chapter 5 keeps building and dissects the instruments used for global forest governance. A variety of tools have been used over the years, so the chapter begins by reviewing the trends and taking stock of the available instruments. Then, it turns to the constraints for effective implementation and how to deal with them. Finally, the chapter points out the correlations to negotiations and distills the complexity of implementation.

Chapter 6 provides an overview of our principal findings in response to the research questions about sustainable development diplomacy and global forest diplomacy in particular and makes recommendations for global forest governance that are derived from our research presented in the first five chapters. It returns to the overarching research questions, setting forth the overall conclusions of the study and discussing the implications of these findings for future research on the effectiveness for the system of global forest governance and sustainable development diplomacy more broadly.

Chapter 2

The Emergent System of Global Forest Governance and its Challenges

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2.1 Introduction

As stated in the first chapter, we accept Sustainable Development Governance as the sum of organizations, policy instruments, financing mechanisms, rules, procedures, and norms that regulate the processes that determine sustainable development at the global, national, and local level. Against this background, we define Global Forest Governance (GFG) as a subset of the broader sustainable development agenda. The development of the GFG is highly interlinked with and related to the development of the encompassing system of global SDD. We take as our point of analytical departure that GFG is not only a cornerstone of sustainable development, but that to understand the complexities, challenges and nuances of GFG it has to be placed within the evolving concept of sustainable development.

Since forest issues entered the international agenda in the early 1980s, global forest politics and policies have been developing rapidly (Humphreys, 2006). The GFG system we have today may reflect both the successes and failures of this process. On the one hand, there is a high awareness of threats to forests and numerous efforts have emerged to address them globally. However, at the same time—and ironically partly because of the rather spectacular growth in awareness and initiatives— the GFG system may have outgrown its original design and intent in terms of addressing the problems and societal goals that led to its creation.

Compared to three decades ago, even though the GFG system, as we will analyze in this thesis, has achieved much in the way of new instruments, more money, and a more participatory and active system than anyone anticipated, deforestation and forest degradation continues. Indeed, because we know so much more about the forest conditions and processes, we also know more about what is not going well with the forests worldwide. Slash and burn agriculture, conversion to plantations, and climate change are just a few of the many challenges forests face (FAO, 2009).

We accept as our basic assumption that the effectiveness of SDD will ultimately depend on its simultaneous implementation at both the global and domestic levels. This assumption also applies for GFG. National implementation is the ultimate indicator both to efficacy of the GFG system and to meaningful actions on the ground (Young, 1994). However, within the context of our study, and for the purpose of this chapter, we will focus principally on the global and institutional aspects of GFG, including efforts to create the support for domestic implementation, but not including the considerable

challenges of domestic implementation. That is a crucial issue as well, and one worth seriously studying, but it lies beyond the scope of our study.

Another important consideration of this chapter is that GFG, including its evolution, cannot be fully understood – let alone lead to meaningful recommendations to overcome its challenges – without having a more textured understanding of the system of SDD. SDD provides the framework and context in which GFG will be scrutinized throughout the remainder of this study.

This chapter seeks to do three things. The first section sets the stage by describing the evolving concept of SDD and analyzing the challenges of the emergent system of SDD. We approach this diagnosis with the goal of identifying the extent of the challenge and building a base understanding that we can use to explore GFG. Second, we specifically examine the system of GFGD and the particular challenges it faces. In doing so we examine how and when forests emerged on the international policy agenda. Finally, the chapter concludes by identifying the overriding challenges for GFG.

2.2 The Emergent System of Sustainable Development Governance

Since the 1960s and 1970s global environmental threats have attained a prominent position on the international agenda (Haas et al., 1993). An important contribution to this emerging agenda was the Limits to Growth, a study by the Club of Rome published in 1972 that challenged the neoclassical paradigm and assumptions of classical economics. Based on applied global-systems computer modeling, different scenarios and trends were analyzed predicting different trajectories for population dynamics, economic growth, and natural resources, which accelerated the emergence of environmental concerns on the international scale (Meadows et al., 1972).

By the 1980s, "sustainable development" was emerging as the catchword of an alternative paradigm encompassing both environmental considerations as well as development objectives[1]. The first public use of the term "sustainable development" was probably in 1980, when it appeared in the World Conservation Strategy (WCS), a document prepared by the International Union for the Conservation of Nature and Natural Resources (IUCN) (Humphreys, 1996). The WCS looked at sustainable development as the integration of conservation and development to ensure that modifications to the planet do indeed secure the survival and well-being of all people (IUCN 1980). The term "sustainable development" was popularized and refined in 1987 by the World Commission on Environment and Development (WCED), which is better known as the Brundtland Report after the commission's chair. Its report, Our Common Future (WCED, 1987), brought the term sustainable development to the forefront of international discourse and policymaking. The Brundtland Commission's discussion of sustainable development emphasized global interdependence, the need to consider future generations, the need to meet the needs of the world's poor, and the need to protect the environment.

[1]The term sustainable appears as early as 1905 when Gifford Pinchot used it in describing "sustainable yield" as a criterion for harvesting timber on a long term continual basis. The term was also used later to connote a level at which fish might be continuously taken without diminishing the annual amount that could be caught.

Some commentators have argued that the term sustainable development is oxymoronic, or so general as to be meaningless. Others followed the approach of the Brundtlandt report and accepted that sustainable development may best be viewed as a process rather than as a state to be achieved – a process that is not necessarily the same for all countries, but that is founded on informed public input from all through a transparent process that uses integrating tools such as sustainable development impact indicators, and natural resource accounting (Conca and Dabelko 2004).

The Brundtland report itself does not elaborate what is meant by the harmonious treatment of the environment or when human activities will result in unacceptable damage to the environment. The fact that divergent responses are possible to these questions is evident from the differing measures used to determine the yardstick. As a consequence, the room the Brundtland report leaves for interpretation has made it possible for deeply-rooted differences in interpretation to surface (WRR, 1994).

Perhaps the most lasting accomplishment of the Brundtland Commission was to thrust the concept of sustainable development into the mainstream of world debate (Sitarz, 1993). The Brundtland Report described sustainable development as development that "meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). To meet this condition, the environment, the economy and society must all be considered in an integrated manner. The Bruntland formulation asserts that the earth's natural systems have finite capabilities to support human production and consumption, and that eliminating poverty is the surest way to protect environmental quality. The concept also assumes the need for greater equity, not only between wealthy and poor nations, but also within societies and between generations (WCED, 1987).

The concept of sustainable development was immediately seen by many as the only rational way to confront the interrelated problems of environmental destruction and essential economic development (Humphreys, 1996). However, the differences in definitions and elaborations make it clear that sustainable development is not an objective feature of a process. Sustainable development is a two-sided relationship as both the well-being of mankind and society and that of environment play a role in evaluating those activities. Social well-being can be measured in terms of the extent to which needs are satisfied of present and future generations and the well-being of the environment in terms of the extent to which environmental functions and assets are left unharmed (WRR, 1994).

As many reports have suggested, the consequences of the types of production and consumption patterns that the developed countries enjoy can be detrimental to the interests of future generations. Yet over two decades after the concept was enunciated, developing countries of the world are also racing forward to achieve such production and consumption for their own development, and as a means of eradicating poverty. Underscoring the urgency of the situation and the challenges at hand, a leading Dutch study of the Scientific Council for Government Policy concluded that:

> *"The fear was that if things go on as they are, an untenable situation will arise and that people will not only degrade the physical environment by their actions but,*

> *ultimately, also threaten human existence itself. That amenability manifests itself in such ways as the wasteful use of finite raw materials, the utilization of natural resources in excess of their regenerative capacity and damage from human action to the conditions for existence of all manner of plant and animal species" (WRR, 1994).*

In December of 1989, the General Assembly of the United Nations confronted these daunting challenges. The urgency of the problems of development and environment prompted the nations of the world to call for an unprecedented meeting – a meeting of all the nations on Earth – an Earth Summit. Resolution 44/228 expressed concern at the "continuing deterioration of the …global life-support systems" (UNGA, 1989). It recognized the global character of environmental problems and identified unsustainable patterns of production and consumption, particularly in developed countries, as the cause of much of that deterioration (Elliott, 1998). The resolution identified a number of major environmental concerns that jeopardize environmentally sound and sustainable development in all countries – protection of the atmosphere, land resources, combating deforestation, biological diversity, and issues relating to poverty and human health conditions (UNGA, 1989).

The scope of attendance at the Earth Summit clearly defined the importance of its task. This historic meeting was the largest gathering of heads of state in the history of international diplomacy. On June 13, 1992, nearly 100 world leaders met around a single table at what was formally called the UN Conference on the Environment and Development (UNCED).

In four pre-conference sessions by the Preparatory Committee of the Earth Summit, the central tenets of a coordinated global approach were formulated. The major output of UNCED was a non-binding agreement called Agenda 21, which is a global plan of action to achieve more sustainable societies. The Conference also produced two non-binding sets of principles – the Rio Declaration on Environment and Development and the Statement of Forest Principles – that helped create norms and expectations. Furthermore, the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD) were opened for signature at the Earth Summit. The UNCED reports were submitted to the 47th session of the General Assembly at the end of 1992, which endorsed the Rio Declaration, Agenda 21, and the Statement of Forest Principles. Furthermore, it established a standing agenda item on the implementation of decisions and recommendations of the UNCED and decided to convene a special session for the purposes of an overall review of Agenda 21 not later than 1997 (Doulman, 1995).

Agenda 21 is, like the Rio Declaration, a non-binding agreement and sets out a detailed plan of action for implementing the principles of the Declaration and for contributing to sustainable development (UNCED, 1992). It has 40 chapters of which Chapter 11 exclusively focuses on forests (see Chapter 5 for a more detailed account on this matter) (UN, 1992).

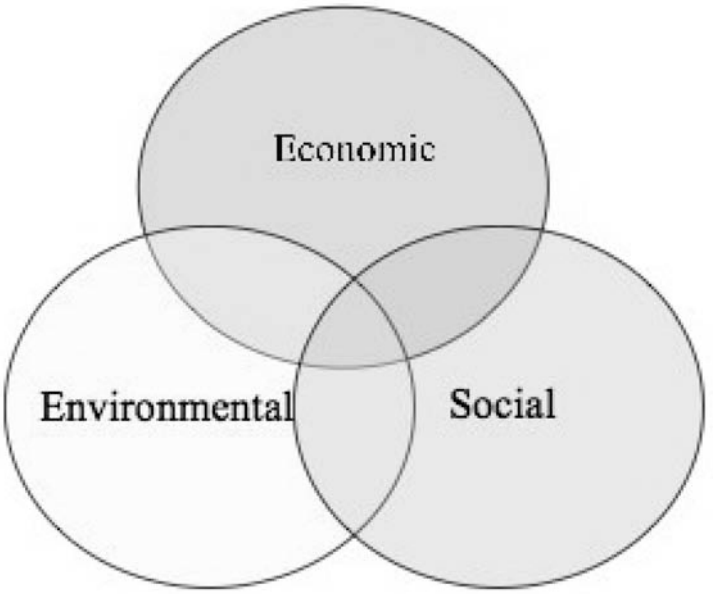


Figure 2.1 Three Pillars of Sustainable Development

After UNCED, global sustainable development politics involved increasing interactions among states and non-state actors that transcended a given region regarding international decisions that affect the three pillars of sustainable development: people, planet, profit (Rogers et.al., 2006), as can be seen in Figure 2.1. Since then, much of the international efforts have focused on efforts to negotiate multilateral agreements for cooperation to protect the environment and natural resources in the context of sustainable development. According to some estimates, over 500 MEAs have been signed covering a broad range of different, but related, issues (Young, 1999). These agreements constitute global regimes of varying effectiveness that govern state behavior in regard to the issues that required action. Although the effectiveness of regimes as "'social institutions consisting of agreed upon principles, norms, rules, procedures, and programs that govern the interactions of actors in specific issues areas'" is questioned by many scholars, the relentless efforts of the international community to pursue this treaty-making approach is an important characteristic of sustainable development governance (Young, 1999: 1).

Another hallmark of the system of SDG is the regular gathering of a series of international conferences related to this global public goods agenda. Building upon UNCED and the efforts leading up to it, Rio also launched a new round of global development conferences that would lead to the Millennium Assembly in 2000. The Millennium Declaration of the UN, agreed at the Millennium Summit of September 2000 not only summarized the agreements and resolutions of the UN world conferences held during the years prior, but more importantly established the Millennium Development Goals (MDGs). These quantitative goals are generally accepted as

benchmarks for measuring actual development gains (Hens and Nath, 2005). Although progress towards achieving the MDGs is mixed at best, most stakeholders interpret and use these goals as a powerful political tool to hold governments and international organizations accountable (Weiss et.al., 2004).

The Millennium Assembly was soon followed by a second round of world conferences dealing with the difficulties faced by the world's least-developed countries as well as the challenges in global trade and finance. An important benchmark in sustainable development governance is the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, in 2002. At the WSSD, the international community reaffirmed its commitment to sustainable development. The Summit produced three key documents, the first of which was the Johannesburg Declaration. The second was the Johannesburg Commitment, a plan of implementation, which set out a comprehensive program of action for sustainable development. Finally, the Summit diversified the toolkit for SDG by introducing a new concept to support sustainable development in the form of partnerships, comprising voluntary arrangements among state and non-state actors (type 2 agreements) (Rogers et.al., 2006). In 2005, the United Nations released the Millennium Development Goals Report, which detailed the progress, if any, made towards achieving the MDGs. Also in 2005, the UN General Assembly adopted the 2005 World Summit Outcome as a follow-up to the 2000 Millennium Summit. The World Summit Outcome, which frequently uses the term "development" as a short-hand for "sustainable development," reaffirms the Millennium Declaration and recognizes sustainable development as a key element of United Nations activities. Taking the 2005 Summit Outcome as a whole, together with the other processes mentioned above, it looks as if sustainable development is widely mainstreamed as an overarching paradigm in the international governance system recognizing different roles for diverse stakeholders.

The involvement of a range of actors in governing sustainable development is not new, nor exclusively reserved for the sustainable development arena. As will be analyzed more thoroughly in the following chapters through the lens of international forest policy-making, the mosaic of actors that make up the de facto system of SDG is both rich and diverse and includes multiple institutional entities, although not all have equal influence on the system. Within the system of SDG the state is still perceived as the primary actor (Najam et.al., 2004). Nevertheless, the system is composed of at least four additional entities, each of which is influenced by and can impact the behavior of states. The first category is international environmental organizations – including, for example, the United Nations Environment Programme (UNEP), the Commission on Sustainable Development (CSD), the Global Environmental Facility (GEF), and the secretariats to various multilateral environmental agreements (MEAs).

The second category identifies a broader set of related international organizations whose mandate is broader in scope – reflecting the other pillars of sustainable development – and which can have significant impacts. Obvious examples are the World Bank and the United Nations Development Programme (UNDP), which are direct interlocutors in sustainable development governance through their portfolios of

development interventions (Tolba and Rummel-Bulska, 1998; Najam, 2002). These interstate actors along with state actors support all three of the dimensions of sustainable development through the creation of institutional capital and the operation of institutions in support of sustainable development.

The third category, non-state actors, is not only the largest category but probably has had the largest impact on SDG (Arts, 2008). However, it tends to be discussed only peripherally. This category includes the vast number of nongovernmental organizations (NGOs), but also private sector and multinationals that have been prime demandeurs of more and better global SDG and which remain key generators of agendas, knowledge, and monitoring intelligence on the state of global SDG (Najam et.al., 2004). This category has to be broader than just NGOs of all varieties and should also include academia, science and the mass media, all of which can influence how global SDG is conceived and implemented through the societal and environmental dimensions of sustainable development through the creation of social and the protection of natural capital (Wapner, 1996). The business sector is primarily involved in the economic dimension of sustainable development by creating economic capital. However, as we will analyze in more detail in chapter 4, corporations have been active in international relations in multiple manners by influencing, amongst others, regime creation by employing special assets, including particular technical expertise, in accordance with their corporate interests (Porter et.al., 2000). Agreements and partnerships among non-state actors have been referred to as Type 3 agreements (Chester and Moomaw, 2008).

The fourth category spans public concern and action for the global public good agenda. This becomes the basis and driver of action for the other categories and is a powerful trigger of domestic political pressure, which, in turn, can dictate the behavior of international organizations, such as the World Bank, as well as the various political processes. Additionally, it can also be a direct actor, such as through consumer activism that can result in product boycotts and other forms of de facto standard setting (Keck and Sikkink, 1998).

Before we examine the key characteristics of the emergent system of global forest governance and its particular challenges, we now turn to the governance challenges of the sustainable development system, particularly those that are most commonly discussed in the academic literature.

2.3 Governance Challenges for Sustainable Development: What is the Problem?

While our understanding of how the various actors collude, collide, and coalesce in the global policy space remains incomplete both from the global forest governance perspective, as well as the broader sustainable development agenda a system has emerged organically (Young, 1994). It is imperfect and, of course, has room for improvement, but it is a system that has proved to be resilient as well as prolific.

An optimistic account would suggest that the last few decades of global sustainable development action has resulted in a frenzy of international treaties and negotiations, the generation of significant amounts of funding, a plethora of projects, an array of new

organizations, and the development of new knowledge. A less sanguine assessment could argue that most treaties remain unimplemented, commitments for technology transfer and funding of programs fail to materialize, the money that is made available tends to get squandered, and new organizations are competing over conflicting and sometimes overlapping mandates.

We accept that there is some merit in each of these stylized assessments. In general, and for forest issues in particular, major challenges require an effective governance response to the multifaceted, complex, interlinked sustainable development issues.

Although the following chapters will analyze the governance challenges related to forests in more detail, particularly in chapter 5, here in the broader sustainable development context we will identify the governance concerns that are usually cited.

a. Proliferation of MEAs and Fragmentation of Sustainable Development Governance

There are too many organizations engaged in SDG in too many different places, often resulting in duplicative or even conflicting mandates. The MEA Secretariats, as a subset within sustainable development, are located in disparate parts of the world, have varying levels of autonomy, and focus on separate but interrelated environmental problems (Knigge.et.al., 2005). For example, the climate secretariat is administered by the UN Secretariat whereas the ozone and biodiversity secretariats report to UNEP. The CSD Secretariat is based in New York, the CBD is located in Montreal, UN Convention to Combat Desertification (UNCCD) and the UNFCCC in Bonn, and the Convention on International Trade in Endangered Species (CITES) and the Basel Convention in Geneva. Fragmentation has lead to conflicting agendas, competence fights (turf wars), geographic dispersion, and inconsistency of rules and norms, especially as the different secretariats have limited opportunity to interact and cooperate (IPCC, 2001). Geographic dispersion leads to higher travel and personnel costs, larger reporting burdens, and 'negotiating fatigue.' In particular, this drains scarce human and institutional resources in developing countries and tends to distract the best resources, using them for global governance rather than putting them towards national implementation (Najam et.al., 2006).

b. Lack of Cooperation and Coordination among International Organizations

The concern here is about the absence of any meaningful coordination mechanisms for SDG. For the environmental pillar of sustainable development, such coordination is part of UNEP's mandate (REF). However, UNEP has never been given the resources or the political capital to fulfill this mandate. UNEP's ability to 'coordinate' with other UN agencies is further hampered by the sheer number of agencies and programs in the UN that have some stake in environmental protection. The creation of the GEF as the main financing mechanism, the multitude of MEA secretariats, and the mandate of the CSD have all diminished UNEP's authority and led to fractious turf wars and inter-agency politics. A climate of inter-agency distrust, uneven resource endowments, and

unclear (and sometimes conflicting) mandates from the member states has not been conducive to either institutional cooperation or coordination. Commentators conclude therefore that the CSD – with its broad mandate on all three pillars of sustainable development and its role to ensure effective follow-up of UNCED - has not lived up to its promises and has turned into another talk shop, lacking the necessary

buy-in from a broad range of sectors to be effective in setting the sustainable development agenda (Chasek et.al., 2006). For many observers of the process, it is vital that the CSD attracts and involves ministers of finance, trade, agriculture, and development cooperation to really live up to its expectations in terms of improving the effectiveness of the sustainable development system by, amongst others, expanding the narrow environmental scope of the Commission while integrating the other pillars of sustainable development.

c. Lack of Implementation, Enforcement, and Effectiveness in Sustainable Development Governance

The sustainable development diplomacy system has turned into a perpetual "negotiating system" that is obsessed with continuing negotiations rather than implementing governance institutions that implement existing agreements. The ongoing efforts of Canada to continue its efforts with a group of like-minded countries to negotiate a legally binding agreement on forests after the General Assembly of the United Nations concluded on a non-legally binding instrument on forests in 2007 is just one example of the inherent tendency to negotiate, instead of implement existing agreements, that has hampered the systems for years. The governance implementation deficit is compounded by the fact that there is a dearth of enforcement mechanisms and little to no focus on ensuring that the instruments are effective in meeting their original objectives. The sustainable development system contains no meaningful dispute settlement body and few options are available to measure, ensure or enforce compliance. As with many other international processes and institutions, consensus building in sustainable development negotiations is driven more by political feasibility rather than science or facts on the ground. This problem, of course, is endemic to international organizations and is not unique to the sustainable development system.

However, ignoring science in the case of complex and long-term natural resource processes, including those associated with forests, can have much higher and longer-lasting detrimental effects for sustainable development than will be visible in many other arenas (Najam, 2006). For long, science and scientists have helped to mobilize debate and action by governments on a range of sustainable development issues. On many issues scientific expertise is critical to assist policy-makers in the design of a governance response (Elliott, 1998). However, science and the scientific community have become politicized in two ways. First, scientists themselves have become part of the political process, contributing to and becoming involved in decision-making. Second, science has become politicized as the results of scientific research, often subject to uncertainties and differences within the scientific community, and has been appropriated by policy-makers in the pursuit of political and economic interests

(Jasanoff, 1990). As Litfin demonstrates, with respect to ozone depletion, "even within a relatively narrow range of scientific uncertainty, nations can easily interpret the available knowledge according to their perceived interests" (Litfin, 1993, p.100).

d. Inefficient Use of Resources

The concern that is usually raised here is that the system as a whole seems to have significant (even if insufficient) resources, but the duplication and lack of coordination within the system can mean that resources are not always used most efficiently. For example, in 2000 the World Bank had an active portfolio of over $5 billion in environmental projects, the UNDP's portfolio was over $1.2 billion in the same year, and the GEF has funded over $4.5 billion of projects since its inception (Kurz et al., 2008b). These resources were also used for project development as well as their implementation. In aggregate, national governments, civil society, and the private sector also expend significant financial resources on projects in the field of sustainable development. In spite of this impressive pool of money, particular elements of the system remain chronically under-funded. Geographic fragmentation and duplication of activities often result in higher operational costs and inefficient use of resources. With greater coherence in the governance system and in financing, a great deal more could be achieved with the existing resources.

e. Sustainable Development Governance in the Broader Context

An increasing number of important decisions affecting SDG now take place outside the SDG arena in areas such as trade, investment, and international development. While institutions like the World Trade Organization (WTO), UNDP, and the World Bank have begun to pay much more attention to sustainable development than in the past, including to forest issues specifically, their discussions still remain largely outside the global SDG discussions. Or, rather, sustainable development actors remain at the periphery of those decisions. In many cases, sustainable development decision-makers in general and, as we will analyze in more detail, global forest negotiators in particular tend to talk only to each other and are neither invited to nor make an effort to be meaningfully involved in broader development decision-making.

For the system of global SDG as a whole to be effective it needs to find ways to more meaningfully links to other areas of global policy, to ensure coherence with other areas of public policy, and to mainstream sustainable development considerations into macro-economic and security decisions. In the remainder of our study we will analyze this for the forest case in which we identify the interaction of multiple institutional arenas where global forest governance is being discussed with a view to generate a more in depth understanding of the evolvement of the system.

f. Non-State Actors in a State-Centric System

The institutions engaged in global SDG are designed to be state centric. However, civil society actors, such as environmental NGOs and business, are playing an increasingly large role in global sustainable development policy-making and implementation. NGOs

play important roles in stimulating international conventions, drafting treaties, providing scientific information, and monitoring implementation. NGOs can also be critical in the implementation of international commitments. The private sector is becoming increasingly engaged in SDG with a view to increase their market share and responding to corporate social responsibility demands for example through greening their market strategies and through voluntary commitments and Type 2 public-private partnerships, such as developed during the WSSD in Johannesburg. A more detailed account of this kind of arrangement for our case study will follow in chapter 5.

The SDG system, however, was not designed to accommodate these myriad non-state actors. The challenge for the system of SDG is to create the institutional space to allow non-state actors to realize their full potential.

There is much debate amongst scholars and practitioners about whether and how important these various challenges are. However, there seems general consensus amongst policy-makers and scholars that more investment in new concepts is needed to improve the system as it now exists. There is also an emerging sense that the discussion of SDG reform should envision a system in which the many different parts can interact more efficiently and effectively in realizing the ultimate goals of sustainable development. Finally, as SDG changes over time, it is important to pay attention to how SDG affects the various sectors within it. Conversely, to develop GFG in greater depth, the larger framework of SDG needs to adapt to the new environmental, economic and political/institutional conditions.

2.4 Global Forest Governance and Diplomacy: The Story

Deforestation is an issue that gained global prominence over the last century (Humphreys, 1996). Given the transboundary nature of forests, associated issues are inherently complex and global, and the system of GFG requires the engagement of multiple actors and non-forest political venues. As we will analyze in more detail in chapter 4, starting with governments and civil society, GFG has involved a wider range of actors over time, including, but not limited to, private companies, research institutions and local communities. The causes of deforestation arise from a multitude of factors and the interlinkages with other issues at all levels. Global forest governance is the end product of an array of political, economic, environmental, and social dynamics arising at the international, regional, national, and local level. As we stated earlier, our point of analytical departure is the realization that a de facto "system" of GFG already exists at this point. Over the last few decades, particularly since 1992, a whole array of forest instruments, organizations, and institutions have been developed – some organically and others deliberately – the sum of which looks remarkably like an early, and rather disheveled, prototype of a global network of forest actors and institutions.

a. The Beginning…

Forests were first discussed among countries in 1892, when a proposal for an international forest science research organ at the 1890 Congress of Agriculture and Forestry in Vienna led to the creation of the international Union of Forest Research

Organizations (IUFRO 1992). Despite the early beginning of forest discussions, it was not until the United Nations system was established at the end of World War II that countries began discussing international forest policy issues more intensely (Humpreys, 2006). The FAO Conference first met in 1945 as the principal global forum for the discussion of international forestry issues and it remained so until 1971, when the Committee on Forestry (COFO) was established. COFO meets every two years to discuss forestry issues of an "international character" (Chasek et.al., 2006). Despite these few multilateral forums, forests remained a domestic issue during this period (Humphreys, 1996).

Other milestones in the global forest policy dialogue include the adoption of the International Tropical Timber Agreement (ITTA) in 1983 and the corresponding establishment of the International Tropical Timber Organization (ITTO) in 1986. These organizations promote international trade in tropical timber and the development of forest industries, as well as sustainable management of tropical forests (Humphreys, 1996).

Forest issues and discussions together with other environment- and development-related issues received increasing attention at the end of the 1980s. Since then, more emphasis has been given to achieving a better understanding and appreciation of the multiple functions and significance of forests. The 1992 UN Conference on Environment and Development marked a turning point in the international forest policy dialogue when forests were examined within the context of sustainable development (Humphreys, 1996).

The agreement on the Forest Principles marked the first global consensus on the issue, but at the same time it exemplifies the lowest common denominator between the North and South. It revealed a fundamental confrontation between the North and South, which has remained over the ensuing years, especially over a global forest instrument. From that moment onward a logjam arose in the international forest debate due to fundamental differences between the perspectives of the North and the South.

The forest issue was among the most contentious issues deliberated by governments during UNCED, and there was a wide gap between the concerns and priorities of the governments of the North and those of the South. The developing countries claimed that the environmental agenda of the industrialized countries was being imposed on them, and they strongly defended their sovereign right to develop their natural resources in order to meet national priorities and policy objectives. Accordingly, national sovereignty and the right to development became the fundamental elements of the Forest Principles adopted at UNCED (Soderland and Pottinger, 2001). These fundamental differences in approach, analysis and perspective can be categorized into three clusters:

Sovereignty over forests: representatives of developing countries clearly claimed unfettered national sovereignty over their forests; representatives of the developed world recognized sovereignty, while also advocating that forests were a global common concern.

Conservation versus development: given the devastating effects of deforestation that was highlighted during UNCED, the North focused on international commitments to forest conservation, while the South emphasized the need for economic development (just as the developed countries had become rich by cutting much of their forests) and demanded compensation for economic loss if conservation were implemented.

Causes of deforestation and prescriptions: The developing countries emphasized current global economic concerns, which the North tried to ignore and downplay by focusing on environmental sustainability (Humphreys, 1996).

Underpinned by these three issues, the proposal for an international forest convention became one of the most contentious issues in global negotiations. The discussions centered on the need for a legally binding instrument, which has overshadowed the forest dialogue until 2007. Moreover, many of these tensions that characterized the UNCED negotiations on forests continued to shape forest debates for almost 15 years, particularly under the UN bodies dedicated to furthering action on forests (Elliott,1998).

Despite the tensions, between 1992 and 1995 several joint North-South collaborations, and a new process to develop a common perspective on sustainable forest management were undertaken. These initiatives, which contributed to the review of the Forest Principles and Chapter 11 of Agenda 21 by the UN Commission on Sustainable Development (CSD) made it possible for countries to form a common international agenda on forests (Maini, 1997). This resulted in an agreement to begin the next phase of negotiating within a new forum, the Intergovernmental Panel on Forests (IPF). Also, outside the UN system initiative was taken to form the World Commission on Forests and Sustainable Development.

b. World Commission on Forests and Sustainable Development

A world commission may be considered an innovative mechanism in global politics; a term which goes back to the 1960s. World commissions set out to examine a serious problem of global dimensions that, for various reasons, is being ignored or inadequately addressed by the international political system (Humphreys, 2006).

In October 1991, a meeting on international forest policy was held at the Woods Hole Research Center in Massachusetts. Attended by around 30 policymakers, scientists, and academics, the meeting agreed that an independent world commission should be established with the goal of creating a consensus for a convention. One month after UNCED the first meting of the World Commission on Forests and Sustainable Development (WCFSD) was held in Rome. Members included Australia, China, India, Indonesia, Malaysia, Japan, D.R. of Congo, Ethiopia, Ghana, Nigeria, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Venezuela, Russia, Finland, France, Germany, Sweden, Canada, Mexico, and the U.S. The WCFSD sought to build links between the IPF, IFF and its own work. None of these efforts proved to be particularly successful. The WCFSD made several recommendations in its 1999 report (see Box 2.1).

From the outset it became clear that the contribution of the Commission would depend on the extent to which its findings could influence the global forest process within the

UN framework. In retrospect, it is clear that the Commission attained only minimal influence (Humphreys, 2006).

Box 2.1 The ten resolutions of the World Commission on Forests and Sustainable Development

The WCFSD recommended:

1. that radical and urgent attention should be given to arrest the decline in forests, since forests, their products and services are threatened.
2. that conserving and sustainably managing the world's forests should go hand in hand with the priority of reducing poverty and sustaining the livelihoods of millions of poor people and numerous communities who depend heavily upon forests.
3. that the public interest in a stable and secure environment must become paramount in decisions about the use and management of forest lands.
4. that the public interest in a stable and secure environment must become paramount in decisions about the use and management of forest lands.
5. that the threshold for responsible forest stewardship should be raised to reflect the new responsibilities of forest management to integrate economic, environmental and social considerations and to make the public interest paramount.
6. that new measures must be created to keep track of the value of the capital stock of forests and to create a basis for compensation to countries for the ecological services of forests.
7. that participatory planning for the use of landscapes, not just forests, should be instituted to ensure conservation objectives.
8. that the information base about forests should be enhanced and made more directly useful and applicable to policy-makers and in education programmes for the public.
9. that research and training should be adapted and accelerated to support the new responsibilities of forest management.
10. that additional avenues for political and policy leadership should be exposed to accelerate progress towards solutions.

Source: World Commission on Forests and Sustainable Development. 1997. Our Forests, Our Future. Cambridge: Cambridge University Press, 154-164, as reproduced in Humpreys, 2006.

c. Intergovernmental Panel on Forests (IPF)

The establishment of the Intergovernmental Panel of Forests (IPF) in 1995 was the second building block in the international community's on-going efforts towards developing intergovernmental consensus on forests (Humphreys, 1996). The Panel indicated its support for an innovative mechanism in the form of an informal, high-

level Interagency Task Force on Forests (ITFF).

The IPF work program reflected progress on the implementation of UNCED forest recommendations (Program area I); financial assistance and technology transfer (Program area II); scientific research, forest assessment, and criteria and indicators (Program area III); trade and environment in relation to forests, including voluntary certification and labeling schemes (Program area IV); and, last but not least, international organizations and multilateral institutions and instruments, along with identifying any gaps or areas requiring enhancement and areas of duplication (Program area V). Of course, the IPF again had the daunting task of examining the need for a forest convention, which it pursued through its Cfour meetings: September 1995 (New York), March 1996 (Geneva), September 1996 (Geneva) and February 1997 (New York).

The outcome of the Panel's intensive work, which included a number of government-led initiatives (Grayson and Maynard, 1997), was in itself impressive. The panel agreed on 270 proposals for actions. It elucidated "the consensus on the nature and scope of 11 very complex issues related to forests and agreed on a large number of proposals for action" (ibid.). The actions focused at the national level and were directed toward countries and multilateral organizations as well as other stakeholders.

Given the fundamental differences between the North and South at UNCED, the IPF initially was a fragile and vulnerable institution, but it developed over time into the first truly global forum where governments could exchange views on forest policy and forest politics. The IPF created a firm policy framework for national forest programs in an international context and also dealt with traditional knowledge for the first time in a multilateral forest forum (Humphreys, 1996).

Emphasis within IPF was on international forest instruments and means of implementation such as funding mechanisms, but many fundamental issues were ignored. Questions remain as to whether the IPF really made a significant contribution to sustainable forest management around the world, but, countries agreed that there was added value in continuing the international dialogue and established the Intergovernmental Forum on Forests (IFF).

d. Intergovernmental Forum on Forests

The Intergovernmental Forum on Forests (IFF), as the successor to IPF, came into being from a decision of the 1997 Rio+5 Conference – 19th Special Session of the UN General Assembly. The decision reads as follows:

> *"To maintain the momentum generated by the Intergovernmental Panel on Forests process and to facilitate and encourage the holistic, integrated and balanced intergovernmental policy dialogue on all types of forests in the future, which continues to be an open, transparent and participatory process, requires a long-term political commitment to sustainable forest management worldwide. (UNGA, 1997:Para39)"*

The IFF, supported by the same ITFF used the same format of work as its predecessor, and continued in the tracks of the IPF. The Forum was mandated, inter alia, to consider

matters left pending as regards the programme elements of the IPF; identify the possible elements of and work towards consensus on international arrangements and mechanisms, for example, a legally binding instrument on all types of forests (Grayson and Maynard, 1997).

During the review of UNCED, long day and night negotiations were spent arguing whether the IFF would focus its work on "including legally binding treaty." It was eventually changed to "for example, a legally binding treaty," but again the debate over a legally binding convention captured the entire IFF agenda (Humphreys, 2006).

The IFF maintained the same position within the UN system as the IPF, an open-ended subsidiary body of the Commission on Sustainable Development (CSD). The work programme existed of: the Implementation of the IPF Proposals for action (Category I); matters left pending from IPF, such as financial resources, trade and environment, transfer of technologies, forest-related work of international and regional organizations and under existing instruments (Category II); and international arrangements and mechanisms (Category III). The IFF held 4 meetings: October 1997 (New York), August-September 1998 (Geneva), May 1999 (Geneva), and January-February 2000 (New York).

In its three-year lifespan, the Forum addressed a wide range of topics and drew on the work and outcome of a total of 11 country-led initiatives and 9 meetings of experts. The Forum's final report was submitted to the 8th Session of the CSD in April 2000. It successfully promoted genuine policy dialogue on the full set of forests issues, including "the political will to reach consensus on many complex issues concerning international forest policy" (Soderlund and Pottinger, 2001). As with its predecessor, IFF, the IPF failed to reach agreement on the fundamental issues of an international forest instrument, i.e. a forest convention and financial mechanisms on forests. At the end of the last meeting of the IFF, positions hardened on these issues and deepened the North-South divide. Nevertheless, the IFF agreed that the Economic and Social Council and the General Assembly would establish an intergovernmental body, which was called the United Nations Forum on Forests (UNFF).

e. United Nations Forum on Forests: early period (2001-2005)

Given the circumstances at that time the controversy and seemingly irreconcilable positions for and against establishing a mechanism for moving towards the formulation of a legally binding instrument, the final outcome of the Forum dealt with the matter in its Appendix entitled "International Arrangements on Forests" (Soderlund and Pottinger, 2001). It was agreed that:

> *"The main objective of this international arrangement on forests is to promote the management, conservation and sustainable development of all types of forests and to strengthen long-term political commitment to this end. The purpose of such an international arrangement would be to promote the implementation of internationally agreed actions on forests, at the national, regional and global levels, to provide a coherent, transparent and participatory global framework for policy implementation, coordination and development, and to carry out principal functions based on the Rio Declaration on*

> *Environment and Development, Non legally Binding Authoritative Statement of principles for a Global consensus on the management, Conservation and Sustainable Development of All Types of Forestry (Forest Principles), chapter 11 of Agenda 21 and the outcomes of the Intergovernmental Panel on Forests (IPF)/Intergovernmental Forum on Forests (IFF) process, in a manner consistent with and complementary to existing international legally binding instruments relevant to forests. (UN, 2000)"*

At this moment, the UNFF is the only subsidiary body of ECOSOC with universal membership. Its creation enhanced the international profile of forests. It was created for an initial period of five years (Hoogeveen, 2007), in which it held five sessions: an organizational session in February 2001 (New York), its first session in June 2001 (New York), March 2002 (New York), June 2003 (New York), May 2004 (New York), and its fifth session in June 2005 (New York).

The first session of the UNFF agreed to a multi-year program of work, containing 16 elements (see Table 2.1).

UNFF element	*Lead agency*
1. National forest programmes*	FAO
2. Promoting public participation*	
International	UNFF Secretariat
National	UNDP
3. Combating deforestation and forest degradation	UNEP
4. Traditional forest-related knowledge	CBD
5. Forest-related scientific knowledge	CIFOR/ICRA/IUFRO
6. Forest health and productivity	FAO
7. Criteria and indicators of sustainable forest management	FAO/ITTO
8. Economic, social and cultural aspects of forests	
Economic	World Bank
Social	CIFOR
9. Forest conservation and protection of unique types of forests And fragile ecosystems	UNEP
10. Monitoring assessment and reporting, concepts, terminology And definitions*	FAO
11. Rehabilitation and conservation strategies for countries with Low forest cover	UNEP
12. Rehabilitation and restoration of degraded lands, and Promotion of natural and planted forests	FAO/ICRAF/CCD
13. Maintaining forest cover to meet present and future needs	UNFF Secretariat
14. Financial resource*	World Bank/GEF
15. International trade and sustainable forest management*	ITTO
16. Capacity-building and transfer of environmentally sound	FAO Technologies

Table 2.1 United Nations Forum on Forests: The 16 elements of the multi-year programme of work

Note: * Indicates elements addressed at the second, third, fourth and fifth sessions (other elements were considered at just one of the first five UNFF sessions).

Sources: UN document E/2001/42 (Part II)-E/CN. 18/2001/3 (Part II), 'Report of the United Nations Forum on Forest on its first session; New York, 11-22 June 2001,' 28 June 2001, 16-17; 'The Collaborative Partnership on Forests,' as reproduced in Humphreys, 2006.

An important milestone was the creation of the Collaborative Partnership on Forests (CPF) as the successor of the ITFF, which still exists today. Chaired by the FAO, the CPF is composed of 14 forest-related international organizations (ITFF had 8 members). A major task of the CPF is to contribute to the development and implementation of the UNFF plan of action. Another task is to assist UNFF in monitoring, assessment, and reporting of progress towards the achievement of its objectives, in particular on the implementation of the IPF/IFF proposals for action. Although starting as a promising concept within the UN, the CPF became the reflection of the supranational forest policy bureaucracy (Agarwal et al., 2001). Important contributing factors to its challenges are, as indicated earlier in this chapter for the system of SDG: overlapping mandates of international organizations; multiple organizations within the same broad arena that cut the issue "too thin" and thereby miss out on critical connections and relationships; turf wars between international organizations, which lead to inefficiencies of the system; and last but not least, competing initiatives and programs that contribute to the complexity of the system.

Box 2.2 Interagency Turf Wars: The Implosion of the Collaborative Partnership on Forests (CPF)

In the second half of the 1990s the Intergovernmental Panel on Forests (IPF, 1995-1997) and its successor the International Forum on Forests (IFF, 1997-1999) were established by the General Assembly of the United Nations. These intergovernmental bodies were mandated to define a common vision on how policy issues related to sustainable forest management (SFM) should be dealt with at the global level, including the implementation of SFM at the regional and national level. Although the IPF and IFF were able to produce an impressive list of actions for achieving SFM (IPF/IFF Proposals for Action), the international community was still heavily divided at the closure of the last century over the crucial international forest policy issues. Key outstanding issues surrounded the means of implementation, especially financial means to support actions at the national level and the establishment and legal character of a global forest instrument.

Since the beginning of the 1990s, the global forest issue is dealt with in a variety of international organizations. The most significant organizations are: the Food and Agriculture Organization of the UN (FAO), the World Bank, the Convention on Biological Diversity (CBD), the United Nations Environmental Program (UNEP), the Global Environment Fund (GEF), the International Tropical Timber Organization (ITTO), and the Convention on Biological Diversity (CBD). Each of these organizations has their own governance structure, secretariat, and global forest programs.

When the discussions on the outstanding global forest issues intensified at UN headquarters in New York, the controversies amongst the member states were exacerbated when the international organizations – aware of the controversy among member states – were searching for a way to broaden their scope of work

on forests issues at the global level. Many of the organizations exploited the divisions among national governments, which didn't help the international negotiations. During the intergovernmental meetings, member states' delegations were heavily lobbied by the experts of these international organizations (such as the FAO, ITTO Secretariat and others) to support proposals that extended the mandate of the organization they represented.

Against this backdrop of fierce interagency competition, member states came to an agreement to halt this interagency turf war that was proving to be very destructive to the international process. At the last meeting of the IPF in January 2000, heads of international organizations were strongly requested to establish a mechanism for interagency collaboration. As a response to this request, the Economic and Social Council adopted Resolution 2000/35, causing the Collaborative Partnership of Forests (CPF) to come into being soon afterwards in April 2001. In the ECOSOC resolution it also was decided that a new intergovernmental body, the United Nations Forum on Forests (UNFF), was established with the intention that it should come to a resolution on an international agreement on forests. With the creation of the Resolution, it was envisaged that the UNFF would be supported by the CPF. This newborn mechanism for interagency collaboration consisted of 14 international organizations (such as the FAO, World Bank, ITTO Secretariat, and GEF) and was strongly welcomed by governments as an effective tool to ensure synergies amongst these organizations.

From the outset the new Head of the UNFF Secretariat and the Assistant Director General of the Forestry Department of the FAO made strong efforts to promote and ensure constructive collaboration within the Collaborative Partnership of Forests. As a result of these efforts, the first few years of the CPF interagency hostility and turf wars diminished strongly. Coordination and cooperation turned from dream into a reality on the ground. However this symbiotic relationship did not last for long. With new people coming in, such as new heads of the UNFF Secretariat and the Forestry Department of FAO, combined with the expectation that the provision of new and additional funds by donors could finally become a reality, the emerging trust among international organizations diminished rapidly.

The seventh session of UNFF in 2007 was marked by intense interagency hostility that resembled the period prior to the establishment of the CPF. In the corridors of the UN building international organizations vigorously lobbied delegations while discrediting the relevance of their counterpart organizations. Meetings of the CPF became a formality, less information was shared, and a common position and coordinated programs amongst the member organizations seemed to become out of reach. In particular, the relentless turf wars between the UNFF secretariat and the FAO Department of Forestry over who should be the global coordinating body on SFM paralyzed the functioning of the partnership at that time. During UNFF 7 most of the international organizations sent their

lower ranking officials to the meeting. As a result, the CPF was not a serious player in the outcome of UNFF 7.

Source: personal information from the authors.

The UNFF focused on a broader range of activities than the IPF and IFF. It established new institutional arrangements like expert groups, ministerial segments, multi-stakeholder dialogues, and panels. However, lack of inter-linkages and operating in isolation from each other did generate the expected added value in terms of improving the effectiveness of the system. The multi-stakeholder panels had the benefit of giving exposure to critical voices of civil society, but because of the lack of impact, the intergovernmental negotiations ended in a lot of frustration. Even major groups are now questioning the value of multi-stakeholder dialogues (Humphreys, 2006). The lack of meaningful participation of Major Groups / Civil Society Organizations (CSOs) during UNFF negotiations goes beyond multi-stakeholder dialogues and general interventions in plenary sessions. State-centric multilateral negotiations in general and UNFF in particular miss out on critical expertise and experience that Major Groups / CSOs can bring to the table, particularly during the final stages of the decision-making process. As a consequence, negotiations may lead to outcomes without the necessary buy-in from stakeholders relevant for implementation of the agreement (Najam, 2004).

Until the sixth session, the UNFF could not agree on major steps forwards in the forest agenda. Eventually it reached the law of diminishing marginal returns and many questioned whether anything could be gained within the Forum from trying to agree on further political commitments (Wettestad, 2005). As historically had been the case, the major barrier remained the discussions on the need for a forest convention. Repetition after repetition of discussions occurred without bringing heavily divided parties together. Last attempts were made to bring in new ideas to change the discourse. As we will analyze in our next session, these new ideas proved to be critical as a starting point of the breakthrough. At the UNFF's fifth session, ministers read statements to each other, while in separate rooms they failed to make progress on any decision, and so negotiations foundered. Clear voices erupted to end this "UN talking club of foresters" or "talk shop" (Davenport, 2005). However, in 2006 the controversies between North and South were still unresolved.

f. UNFF (2006-2009): A New Beginning...?

Despite the lack of agreement at UNFF 5, countries reconvened to assess the crisis and to review actions to be taken in February 2006 in New York during UNFF-6. A last attempt was made to try to conceal the main outstanding issues related to the goals for SFM, especially in the light of the Millennium Development Goals, an international forest instrument and means of implementation.

Although the meeting started with the clear feeling of revisiting the "talk shop," events changed. In the days to follow, the feeling of deep crisis changed the mood in the conference rooms and turned it into a shared notion that countries should endeavor in earnest to overcome such lingering concerns and apprehensions. They understood that

this is required and that all those engaged in the forest sector and in its international discussions should put their shoulder to the wheel to help the UNFF to catalyze the implementation of the proposals for action that it had inherited from its progenitors, the IPF and IFF. A crucial consensus arose on four global objectives for sustainable forest management (see Box 2.3) as a stepping stone for an agreement on a non-legally binding instrument for sustainable forest management.

Box 2.3 UNFF Global Objectives on Forests

Global Objective 1

Reverse the loss of forest cover worldwide through sustainable forest management, including protection, restoration, afforestation and reforestation, and increased efforts to prevent forest degradation;

Global Objective 2

Enhance forest-based economic, social, and environmental benefits, including by improving the livelihoods of forest-dependent people;

Global Objective 3

Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests, as well as the protection of forest products from sustainably managed forests;

Global Objective 4

Reverse the decline in official development assistance for sustainable forest management and mobilize significantly increased, new, and additional financial resources from all sources for the implementation of sustainable forest management.

After 15 years of discussions and negotiations, the seventh session of the United Nations Forum on Forests (UNFF 7) in April 2007 adopted a landmark agreement on international forest policy and cooperation that sets a new standard in the management and sustainable development of all types of forests (Ban Ki Moon, 2009). This new global agreement, the "Non-Legally Binding Instrument on All Types of Forests" (NLBI) provided a framework for international cooperation and national action as it endorsed the goals to reduce deforestation, reverse the loss of forest cover, prevent forest degradation, promote sustainable livelihoods, and reduce poverty for all forest-dependent peoples. Following a recommendation from the Economic and Social Council (through its Resolution 2007/40), on December 17, 2007, the General Assembly of the United Nation adopted the NLBI on all types of forests (UNGA, 2007b). As a part of this Resolution, the UN General Assembly also decided:

> *To develop and consider, with a view to adopting at the eighth session of the UNFF (April 2009), a voluntary global financial mechanism/portfolio approach/forest financing framework for all types of forests, aiming at mobilizing significantly increased, new, and additional resources from all sources, based on existing and emerging innovative approaches, also taking into account assessments and reviews of*

> *current financial mechanisms, to support the implementation of sustainable forest management, the achievement of the global objectives on forests and the implementation of the non-legally binding instrument on all types of forests;*
>
> *That the Forum should convene before its eighth session an open ended ad hoc expert group (AHEG) meeting (December 2008) to develop proposals for a voluntary global financial mechanism/portfolio approach/forest financing framework, and invited the Collaborative Partnership on Forests to assist in the development of these proposals (UNGA, 2007b).*

The outcome of UNFF 7, especially on the new NLBI with the Global Objectives on Forests should allow the Forum and the wide range of stakeholders to mobilize their resources and energies and concentrate on effective implementation of the agreements (Hoogeveen, 2007). This would call, inter alia, for a dedicated effort to achieve the level and degree of coordination within and among relevant actors, institutions, mechanisms and processes to the degree reasonably possible. A critical factor for the effectiveness of the Forum is the requisite high-level political will among national governments. Both developed and developing countries, as well as forest-rich and forest-poor nations, need to make a serious effort to put forests and forest discussions on the active political agenda of the international community, most prominently on the UN agenda in order to achieve the global objectives on forests.

UNFF-8 took up the task given by the General Assembly to "develop and consider, with a view to adopt a voluntary global financial mechanism/portfolio approach/forest financing framework for all types of forests". UNFF8 could not reach consensus and decided to complete the consideration of the means of implementation at its next session in 2011, although recent development cause some optimism for a more expedient resolution. Again, the negotiations in the Forum focused on the deadlock about the global forest fund. The challenge that remains is how to address one of the key issues within the international forest arena: mobilizing new and additional resources for forests in order to enhance their contribution to human well-being and the other services forests provide at the local, national, regional and international levels.

Concrete progress with respect to the formulation of a voluntary global financial mechanism can be seen as a critical litmus test for the Forum and even more for sustainable forest governance and diplomacy (Asadi, 2008). The issue of means of implementation will be discussed in more detail in chapter 5.

2.5 The Evolution of Global Forest Governance

As claimed before, the forest issue is complex and has multiple perspectives and linkages to the full range of sustainable development issues (poverty reduction and livelihoods, trade and economic development, security, biodiversity and climate). To handle this complexity, GFG has shifted over time to better address emerging priorities. This evolution is not unexpected, as generally governance progresses and discourse evolves as issues change over time (Arts, 2008). Looking at Global Forests Governance, we can track the emergence of new dominant ideas that shaped – and reshaped - forest policy. Over the last forty years, these shifts have transformed forest policy from a 'commodity

issue' into a 'biodiversity issue,' 'a sustainable development issue,' 'a human rights issue' among others (Arts, 2008).

In this section we address the evolution of the Global Forests Governance system and forests as an international policy issue. We begin by taking a larger view of the forest agenda and the shifts that occurred over the past four decades. Moving from using silviculture or controlled management primarily for commodity production to utilizing in an ecosystem-based approach to support the delivery of environmental services within a sustainable development paradigm, we explore forests from an international policy perspective. This framework, shown by the diagram in Figure 2.2, provides a basis for analyzing how forests have become an international issue.

a. Emerging Ideas in Forest Policy

The long-standing, policy approaches to forest management were aimed at simplifying complex forest policy issues. Traditional approaches assume that forests were isolated from broader social forces and had singular, unambiguous purposes. The early modern European state viewed its forests primarily through the lens of revenue needs (Scott, 1998). For centuries forests were managed as natural resources for human use within national boundaries.

These approaches are less effective today in an era when forests are recognized, as we will analysis in more detail in chapter 3, as forceful determinants of the social fabric, with multiple uses, purposes, and goals. Traditional approaches to forest management which is tendency towards regimentation seem to have difficulties to cope with the modern intensity, variety, and complexity of human activities and expectations. A new sense of scarcity and the increased understanding of global functions of forests are shifting attitudes of governments, civil society and the capital markets to see forest systems as valuable, diverse, and vulnerable assets (PROFOR, 2007). In general terms, maintaining forests as "capital assets" is being seen as critical if individuals and nations are to continue to receive the multiple benefits that flow as sustainable "income streams."

We accept that forests can be viewed through various issue-specific lenses. While forest policy aims to incorporate these perspectives, it also reflects the evolving trends and discourses of forest management. Perhaps the most significant of these trends, forests as an "international" policy issue, is particularly significant. While traditional forest management viewed forests as national resources exclusively for national use, this perspective is being supplanted by a notion of forests as resources of global public goods. The boom in international trade in the nineteenth-century began to move forests into the international policy sphere and growing concerns about environmental degradation in the 1980s have elevated forests to the arena of international policy (PROFOR, 2007).

Figure 2.2 highlights the key issues that have arisen in relation to forests and points to the evolution in how the international community has addressed those issues over time. This evolution is a progression through four distinct periods, each with a dominant idea, prevailing slogan, emerging concept, and focus of policy action.

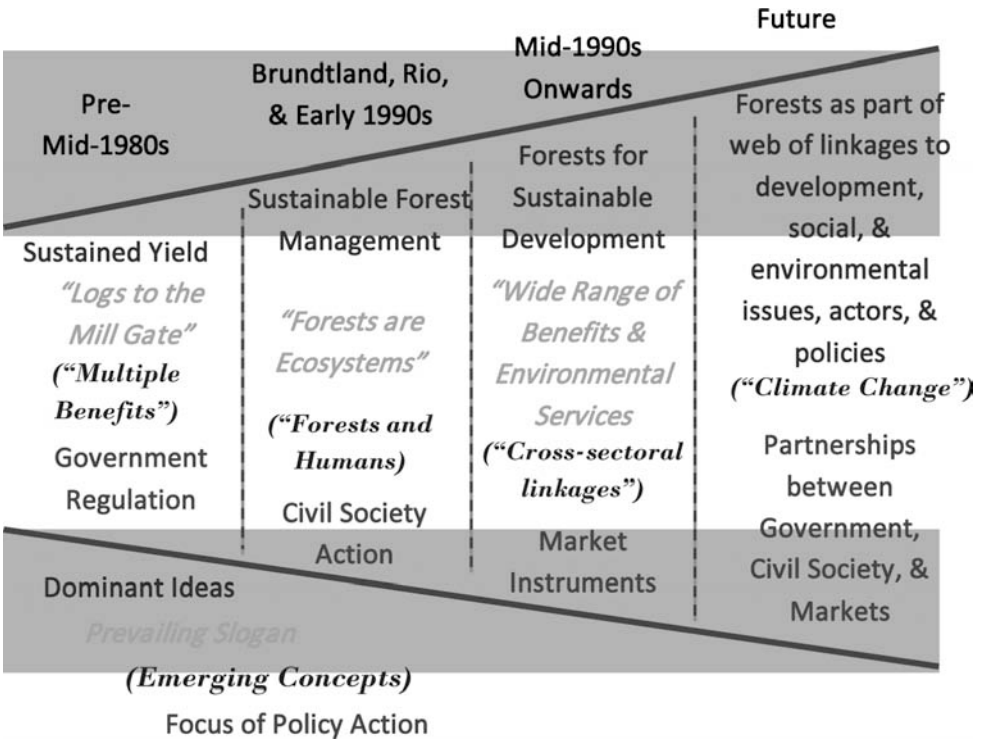


Figure 2.2 The "wedge" diagram

Source: Hoogeveen et.al., 2008

b. Towards Sustained Yield

Deforestation, particularly tropical deforestation, accelerated in the 1970s as developing countries began leveraging their natural resources for their own economic growth and development. Conventional silviculture, or controlled management of forest composition and growth, facilitated unsustainable yields of timber, as forest resource managers pushed as many logs as possible "to the mill gate." Additional deforestation occurred as individuals and governments effected land use changes by replacing forests with agricultural and urban landscape and as forests were lost to fuel use and resource extraction.

The demand for forest products in consumer countries and development pressures in countries such as Brazil, Indonesia, the Philippines, and Mexico lead to multiple activities: increased logging, mineral and fossil fuel extraction, reservoir construction for irrigation, electric power and flood control, wood as fuel use, agricultural production, ranching, and road infrastructure development across millions of hectares of tropical forestland. As a result of these drivers of deforestation, a new sense of scarcity and increased understanding of forests' global roles shifted attitudes of governments, civil society, and business to see forests as valuable, diverse, and vulnerable assets (PROFOR, 2007). As we can see in figure 2.2, government regulation was seen for many policy makers and advocates as the key to providing the resources to reduce these losses. As a consequence forest advocates put pressure on their own and foreign governments to

curb the rate of deforestation and to protect the rights of indigenous people and others living in forests. This redefined the conservation agenda, which expanded by limiting trade in endangered and overexploited species and protecting ecologically sensitive or threatened forest areas. The result was a more universal acknowledgement of the multiple values of forests.

c. From Sustainable Yield toward Sustainable Forest Management

Despite these advances in public awareness, by the early 1990s deforestation still concerned policymakers and advocates around the world. In 1992, 172 governments and thousands of non-governmental organizations (NGOs) participated in the Rio Earth Summit to discuss energy, air quality, water scarcity, and resource production trends (including forest products), as well as their impacts on biodiversity, the environment, and development. After the 1992 Earth Summit, the concept of forest management shifted from sustained yield forestry, aimed at producing a specific product, to Sustainable Forest management (SFM). Sustainable forest management encompasses a much wider range of goods and services that forests provide, such as supporting local people's livelihoods, stabilizing climate providing water storage and water quality protection, providing recreational (and associated economic) opportunities and maintaining the spiritual and cultural values to humanity of sacred natural places, wilderness, and open space in an increasingly urbanizing world. The management of forest ecosystems for this broad range of goods, values, and services therefore requires a much more diversified approach than conventional silviculture could provide (PROFOR, 2007).

As we will examine in more detail in chapter 4, during this period the number of NGOs worldwide grew enormously and they played an increasingly active role in policy development and implementation. As a result, civil society became an increasingly important influence on policy and played important roles in mobilizing and pioneering innovative action on the ground. Additionally, the relationship between forests and human security and well-being emerged as an important new issue.

d. From Sustainable Forest Management toward Forests for Sustainable Development

Before the end of the 20th century, forest products were typically mostly considered in terms of volume rather than quality. Market and industrial structures favored the production of bulk wood products that satisfy a minimum quality and economics of scale associated with highly capital-intensive technologies rather than ways to optimize the value of a diversified "portfolio" stream of forest goods and services. The latter approach requires new knowledge and new organizational strategies and technologies to produce, process, market, and finance a diversified and quality-oriented forest economy at scales that are significant (PROFOR, 2007).

By the end of the 20th century, the emerging idea was that the forest agenda had further evolved from strictly biophysical to multi-dimensional, with sub-national, national, transboundary, regional, and global dimensions.

e. Toward the Future

Until recently, forests were treated primarily as collections of timber stands—discrete, homogeneous units of timber and timber potential (PROFOR, 2007). Nowadays, they are increasingly considered patterned aggregations of trees and other plants in a community with animals and microbes defined by the abiotic conditions of soils, water and climate in functionally interdependent landscapes. Ecosystem management, agroforestry, watershed agreements, ecoagriculture, community forestry, riparian forests, urban forestry, and carbon forests characterize the broad range of new approaches that have come to dominate public understanding of what a forest is and what it can produce.

In this gradual evolvement of forests becoming a global, multifaceted issue, the focus has shifted to recognize forests as providing ecosystem services to meet human needs, specifically human well-being and development needs. As a result, the forest agenda has expanded to include multi-dimensional factors with sub-national, national, transboundary, regional, and global dimensions. Meanwhile, the scope of the global forest agenda has expanded to view forests as important to livelihoods, development, trade, biodiversity, health and human security and most recently to climate change mitigation and adaptation (PROFOR, 2007).

2.6 Challenges for Global Forest Governance

As we began to see in this chapter, global forest governance and diplomacy is facing the same basic problems and challenges as those of other aspects of sustainable development governance. These challenges all relate to the increasing complexity of GFG. For forests to be sustainable, forests require that all three pillars of sustainable development: social, environmental, and economic be addressed through policy.

In 2006, the Chair of UNFF 7 recognized in his address to ECOSOC that "the current system of international forests governance presents a series of challenges which need to be addressed to fully capitalize on the possibility of strengthening the link between forest policy issues and sustainable development" (Hoogeveen, 2006). In his address the Chair pointed towards three particular challenges that needed to be overcome in order to make the system more effective:

a. Complexity of Issues, Inter-linkages, Fragmentation, and Proliferations of Arenas

The emergence of new dominant ideas shaped – and reshaped – international forest policy. In response to this evolution, the system of GFG, however, continues to treat forests in a singular, fragmented manner. Consequentially, the system is still wrestling over how to overcome the 'balkanization' of the system of sustainable forest governance. The Chair of UNFF 7 pointed to the fact that there are many international organizations and processes engaged in global forest governance in many different places worldwide, sometimes with overlapping mandates and duplication of work programmes.

b. Complexity of Actors, Lack of Cooperation and Coordination

As we will identify in more detail in chapter 4 the system of global forest governance, by demonstrating involves a vast number of different stakeholders with differing interests and goals. The obvious, but extremely complicated challenge is how non-state actors should play an appropriate role in a state-centric system that has never been designed to accommodate them. Paraphrasing the words of the UNFF Chair, 'the challenge for the future is to be innovative and to craft additional institutional space to allow for these stakeholders to realize their full potential' (Hoogeveen, 2006).

c. Complexity of Instruments and Lack of Implementation

Diplomacy incorporates both the process of negotiation and the utilization of systems of governance to implement the objectives and goals which have been agreed upon. The history of international forest policy describes an unbalanced diplomatic system, which is in a perpetual stage of negotiation with insufficient attention to its efforts at implementing instruments and systems of governance to meet the stated goal of reducing forest loss. In addition to this generic problem with the system of global forest diplomacy "the system as a whole seems to have substantial, though insufficient, resources, but duplication and lack of coordination can mean that resources are not always used efficiently" (Hoogeveen, 2006). These are formidable challenges that require a deeper exploration.

Chapters 3, 4, and 5 - on issues, actors and instruments –analyze the factors that impede the system of global forests governance in influencing the relevant behavioral complex that channels behavior in such a way as to eliminate or substantially ameliorate the underlying causes of deforestation and degradation.

Chapter 3

Issues and Linkages

Lead author: Patrick Verkooijen; Co-author: Hans Hoogeveen

3.1 Introduction

As the previous chapters illustrate, forests, covering nearly one-third of Earth's landscape, have long been a valuable resource for populations around the world. Forests provide economically valuable industries, support subsistence lifestyles and human well-being, and provide ecological services. As a result, the multiple functions of forests create linkages with other sectors, including development, trade, livelihoods and ecosystem services. Given these multiple linkages, a multifaceted complexity of forest-related issues, as we will analyze in this chapter, has emerged that forms the context of the evolving system of global forest governance.

Historically, forest resource beneficiaries and policy-makers alike regarded forest resources as commodities to be used for human development, such as logs, oil, and minerals. Often forestlands were cut and cleared with little concern for their capacity to sustainably produce forest products or their biodiversity value. During the 19th century, Europeans developed scientific forestry that converted forests into tree farms, often planting monocultures of highly productive non-native tree species. The tendency was toward regimentation in which trees were drawn up into serried, uniform ranks, to be measured, counted off, felled, and replaced by a rank and file of lookalike conscripts (Scott, 1998). Influenced particularly by the scientific management methods of France and Germany, the United States established the U.S. Forest Service in 1905 to manage the vast government owned lands for "sustainable" timber production and other "multiple uses" including watershed protection, wildlife and recreation. Since then some of these lands have received even greater protection under the Wilderness Act and Roadless Area designations.

Forests were also often seen as impediments to the expansion of human capacities and were (and continue to be) cleared to provide additional space for urban and industrial development and agricultural land. Nations with frontier forests have historically allowed citizens to claim forested lands if they "improved them" by clearing trees (Scott, 1998). Such practices continue in some countries today.

As identified in the previous chapters, it was not until the 1980s that the environmental community and indigenous peoples raised alarm about the unprecedented rates of deforestation overtaking tropical countries and the potential impact on species extinction. Swept up in increasing awareness of ecological disasters, forests were elevated to an international issue and became, at that time a biological diversity issue, and, with regard to indigenous peoples and local communities, a human rights concern.

In this chapter we develop a pathway through the complexity and cross-sectoral nature of international forest policy from a multi-issue perspective. The realization that forests were much more than commodities to be claimed or land to be cleared altered the nature of the international dialogue significantly (Maini, 2004). By this point, the multi-dimensional linkages between forests and development, trade, and illegal logging were taking shape. New connections between forests and other issues were increasingly being recognized, such as the dependence of indigenous peoples on forests for their livelihoods and security concerns associated with illicit activities (Maini, 2003). The emergence of these new linkages added another layer of complexity to the evolving system of global forest governance, which intensified more recently when climate change surfaced as a new international threat with a profound forest related dimension.

Despite, or perhaps because of, the complexity and interconnectivity of the issues related to forests, different actors and instruments tend to conceive of forests in relation to their own overarching interests and within their own instrumental rationality: the environmental movement aims to protect forests from exploitation in order to protect biodiversity and ecosystems, the utilitarian conservationists support the sustainable use of forest ecosystems, local communities see forests primarily as a livelihood issue, the private sector focuses on the return on investments, the trade regime deals with trade in forest products, with marginal concern for the continued availability of forest products, governments support clearing of forest land for increased livestock agricultural production and the climate change regime is focusing on the effect of deforestation and degradation on carbon sequestration as part of the global carbon cycle.

Before we begin to examine more thoroughly the other system components, actors and instruments, in the next two chapters, the interrelatedness of the different issues that frames the emerging system today will be analyzed.

A range of sector-based lenses are used: development, trade, livelihoods and human health, security, biodiversity and climate change. Through these different lenses we seek to understand the extensive range of cross-sectoral linkages between these respective domains that affect forest management (Maini, 1996). These lenses tend to offer narrow perspectives that reflect how policy is derived for specific purposes that provide, as it turns out, insufficient attention to cross-cutting themes and interests.

Figure 3.1 provides a visual image of the linkages among forest-related issues highlighting the complexity of the forest system. From this, forest-related issue linkages that represent many, though perhaps not all, of the major viewpoints on forests have been selected. We do this to paint a broad-brush overview of the interdependency between various objectives and constraints that affect forest management and to illustrate the complex institutional and societal context that an effective system of global forest governance must account for today.

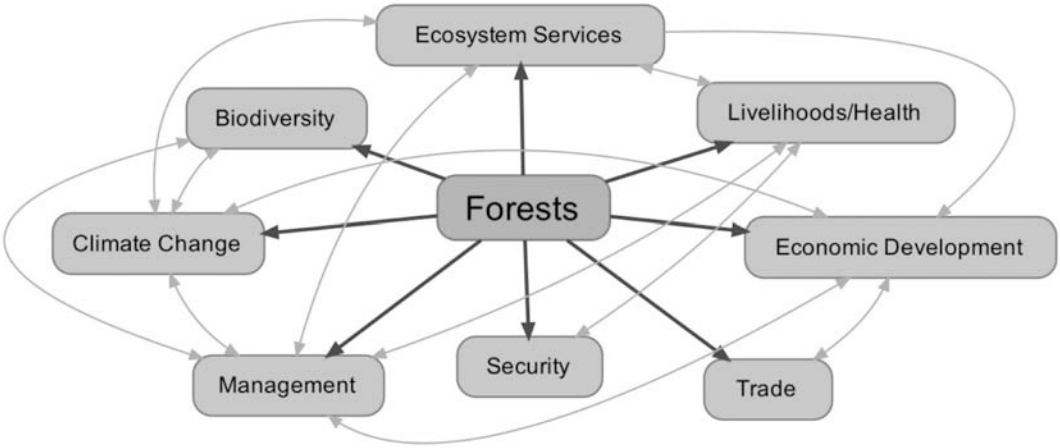


Figure 3.1 Forest linkages: systems diagram of the relationship between forests and other sectors and issues as well as linkages among the other issues

3.2 Forest Linkages

Underlying the analysis of the complex interactions of forest-related issues is the understanding of the three pillars of sustainable development, as presented in chapter 2. Throughout this chapter the inter-linkages between forests and the various issues are shaped by the implications in each of these three realms: the economy, the environment and society. Another important consideration for understanding the complexity of the system is the recognition of the multiple underlying causes impacting deforestation and forest degradation (Chomitz, 2007). The multiplicity and interconnectivity of these underlying causes contributes to the complexity of the system resulting in a governance challenge on how to manage it.

Box 3.1 Underlying causes for deforestation and degradation

The main driver of deforestation and forest degradation is forestland conversion into other uses, primarily commercial agriculture and subsistence farming. Another major contributor is unsustainable and often illegal logging practices leading to excessive forest utilization. The most commonly cited underlying causes of deforestation and degradation include:

Socio-economic drivers. Rural poverty, population growth, agricultural expansion, increasing demand for wood for industrial and consumer markets and the high degree of dependence of low income families on fuelwood and charcoal in their energy supply are the key socio-economic drivers of deforestation. These factors are amplified by a lack of alternative off-farm employment and inadequate

social infrastructure such as education and health facilities posing significant constraints to the achievement of reduced emissions from deforestation and forest degradation.

Extra-sectoral policies. In many cases deforestation and forest degradation is resulting from policies of other sectors, such as agriculture, transportation, energy, industry, mining and tourism, which do not consider climate and other environmental and social impacts on forests. In many countries subsidized agribusiness developments such as cattle ranching, oil palm, cocoa, soybean and rubber are leading to large-scale conversion of rain forests with significant climate impacts. Design of national development policies and programs should consider adequate provisions for forest protection and the full value of various forest functions and services, including climate change mitigation.

Private investment in unsustainable activities. High global demand for forest sourced wood products combined with lack of comprehensive demand and supply-related regulatory measures continue to create strong economic incentives to maintain illegal or unsustainable logging practices. Unsustainable harvesting and exploitation is undertaken by a wide range of operators from large private concerns to, in some cases, local communities given the quick profit-making opportunities. Market transformation is needed to promote market access and competitiveness of legally and sustainably produced forest products, which would also ensure maintenance and enhancement of the carbon sequestration services of production forests. The use of investment safeguards, forest certification, and verification of legal sourcing are useful tools to promote market transformation on the supply side, but capacity remains weak in many developing countries.

Weak capacities and insufficient financial resources. There are significant capacity gaps among government agencies, the private sector, forest communities, smallholders and other stakeholders to undertake management planning, implementation and monitoring of sustainable forest management and to protect forest resources from external risks such as encroachment, illicit operations, forest fires and pests.

Undervaluation of forests. The lack of recognition and manifestation of the value of forest-related ecosystem services (climate change mitigation, biodiversity, water, wildlife resources etc.) means forest owners and managers cannot adequately capture the opportunities for revenue generation from these services. These actors are, therefore, constrained in catalyzing or providing necessary reinvestment in forest regeneration. Inadequate economic valuation of the forests acts as a driver for unplanned deforestation through land conversion with large-scale carbon emissions.

Poor governance and corruption. The national policy and legal framework is often inconsistent and lacks clarity to guide forest stakeholders in their actions. The high transaction costs of legal compliance can act as an incentive for large-

scale illegal logging driven by expanding global forest product markets while putting legal operations at a competitive disadvantage. Opaqueness of allocation of forest use rights and forest financial flows, combined with ineffective government regulatory and institutional mechanisms, frequently hinders sustainable forest management.

Unclear land tenure. Many countries have failed to protect and establish clear rights of forest dependent indigenous and other communities, as well as the right of individual farmers to take advantage of their potential role in conservation and sustainable utilization of natural resources resulting in poverty reduction, protection of the forests against encroachment and forest degradation.

Inadequate investment in afforestation, reforestation and restoration. There are approximately 800 million hectares of degraded forest ecosystems in developing countries. Mainly due to unfavorable investment climate, risks, inadequate infrastructure and long transport distances the current markets for forest products and the present funding sources cannot mobilize adequate financing for this investment, which otherwise would significantly contribute to carbon sequestration globally.

Inadequate investment in protected area management. The world's 600 million hectares of protected areas are key for conserving global biodiversity and providing important ecosystem services. In addition, due to their relatively intact nature, protected areas are in many cases important repositories of carbon. However, while many of these areas are economically inaccessible, other areas are under increasing pressure form development and illegal activities, including logging. Many governments do not have the resources and capacities to effectively administer and protect these areas. Without adequate investments these areas are becoming important sources of carbon emissions.

Source: Verkooijen and Dieterle, 2008.

Forests and Development

Forests have long been linked to development. While the wide variety of definitions and connotations associated with the term development encompasses such aspects as livelihoods, health, and well-being, it usually also refers to "economic progress," which is commonly equated with growth in individual income and per capita Gross Domestic Product. The relation flows in both directions: national development and macroeconomic policies affect forests and, forest resource use and policies affect economic growth (World Bank, 2008).

The linkage between forests and development was one of the central controversies in the forest negotiations leading to UNCED in 1992, when opposing views emerged between countries of the developed North and those in the developing South. While Northern governments that had initiated this negotiation process were focused on the environmental dimensions of forest use, Southern governments viewed forest proprietorship in a different light: they saw forests as a tool for national development,

in which each country has a sovereign right to decide how to use its natural resources (Humphreys, 1996). Since then the perceived dichotomy between development and conservation was gradually transformed into the concept of sustainable forest management (Maini, 2004).

Past decades show that the depletion of forests due to land conversion is heavily influenced by economic growth policies (see also Box 3.1, Causes of Deforestation). Competition for land is particularly becoming more intense in developing countries (Cotula et.al., 2009). Urbanization in certain parts of the world is a major trend and as a result, agricultural land and forests on the margins of expanding cities and towns are being lost. More importantly, growing demands for food and feed are translating into increasing demand for agricultural land, particularly in the context where opportunities for enhancement of agricultural productivity are missed. Provided that natural conditions (e.g., soil characteristics) are suitable and that the opportunity costs of land-use conversion are covered, using more land for crop and livestock production is a rational response in the narrow economic sense to increasing demand for agricultural commodities.

Country	Land use	Land use returns ($/ha)
Brazil	Soybeans	3,275
	Beef cattle (medium/large scale)	413
	One-off timber harvesting	251
	Beef cattle (small scale)	3
Indonesia	Large scale palm oil	3,340
	One-off timber harvesting	1,099
	Smallholder rubber	72
	Rice fallow	28
Cameroon	Cocoa with marketed fruit	367

Table 3.1 gives some examples of land use returns that can be derived from converted land (Eliasch Review, 2008)

According to World Bank statistics world population will probably increase by 50 per cent to 9 billion over the next 40 years. Much of this rise will occur in developing countries. Even faster than the growth in the world population is the growth of the global middle class, as a result of economic development. The World Bank estimated that that by 2030, 1.2 billion people in developing countries – 15 per cent of the world population – will belong to the middle class, up from 400 million in 2005 (World Bank, 2007). The growing middle class is important for understanding changing demand because it is able to afford more meat and dairy produce. This kind of diet requires much more land to support it compared with a vegetable-based diet increasing the

pressure on forests (Gerbens-Leenes et al, 2002).

Even if forests are sustainably harvested, the revenues available are often unattractive compared with those available from conversion. The promotion of agriculture, cattle ranching, logging, oil production, mining, and other economic drivers depends on multiple factors, such as government policies and international markets (Chomitz, 2007). Many governments focused on the 'use' of forests up through the 1980s, encouraging productive economic activities rather than conservation or subsistence activities. For example, through its Land Conservation Laws in the past, Ecuador allowed individuals to claim property rights of land through clearing because otherwise it was perceived as 'unproductive.' Along with increasing GDP or exports by these 'productive activities,' governments can also obtain revenue by levying concession fees. Combined with decades of modest regard for environmental impacts, a great deal of deforestation, degradation, and pollution in many of the world's forests resulted. However, in a major break with this trend, on September of 2008, Ecuadorian voters approved the new constitution, which provided legal rights for nature, and called upon government "to avoid measures that would destroy ecosystems or drive species to extinction" (Partlow and Kuffner, 2008). More recently, the Ecuadorian government introduced the notion, as part of the climate negotiations, to incentivize donor governments to pay Ecuador to keep its oil in the ground as a form of climate change mitigation and therefore reducing the pressure on forests.

The extractive and non-extractive uses of other natural resources can leave a large footprint on forested areas (Oxfam, 2006). Extractive pursuits have wreaked havoc on forests for decades. To pursue gold mining, mineral extraction, and/or oil drilling, roads have been constructed through forested areas increasing the pressures on forests (Chomitz, 2007). For the actual extraction, land is cleared and without adequate regulations in place or enforced, spills, disasters, or pollution run-off are common events. Government policies to stimulate exports leading to better terms of trade, such as credit or fiscal incentives for capital investment, have an indirect effect of increasing land clearance for extractive industries (Humphreys, 1996). As opposed to extractive industries, non-extractive uses, when conducted in a sustainable manner, such as fishing, hunting, and even rubber-tapping are generally accepted as subsistence activities that can help alleviate poverty in forested regions while not requiring land clearance (World Bank, 2008).

As noted earlier, agricultural policy has repeatedly led to the destruction of forests (Chomitz, 2007). To advance the economic progress of rural regions, governments use agricultural subsidies and incentives to increase livestock, grain or palm oil production, and they enhance access by building roads (World Bank, 2008; Chomitz, 2007). While in some cases good for agricultural returns, the fate of forests is quite the opposite when potential for agricultural productivity enhancements is not captured. In the Brazilian Amazon for example, higher rates of deforestation are found closer to roads, which raises questions about the impacts of planned infrastructure projects on forest resources (WRI, 2006).

Along with agriculture, the increase in demand for biofuels may lead to increased pressures on forests by planting certain feedstocks (Kleiner, 2008; Taxin, 2008). The last five to ten years have seen a strong resurgence of interest in bioenergy along with the gradual development of more modern and efficient bioenergy production systems. This has been driven by several factors, including government policies, instability in oil producing regions, financial markets shift of investments to commodities and oil, extreme weather events, and surging energy demand from developing countries (Cushion and Dieterle, 2009). In response to these various factors, many countries have begun to explore bioenergy alternatives.

The agricultural capacities of lands in North America and Europe are not sufficient to meet demand for biofuels like ethanol and biodiesel, and increasingly areas of developing countries are cleared. For example, the area of palm oil production is expected to grow to over 12 million hectares by 2012 in Indonesia and Malaysia alone (Carter et al. , 2007). Increasingly the adoption of renewable-fuel targets by many developed countries, national goals for energy independence, and increasing demand for alternatives to fossil fuels is driving the demand for biofuel crops, including corn, palm oil, soybean, and sugarcane. This has lead landowners, including governments, to clear forestlands for cultivation of these crops (Kleiner, 2008). In countries such as Brazil, as the soy diesel industry grows, it facilitates infrastructure expansion to access previously untapped resources that can be found in regions such as the Amazon rainforest (Taxin, 2008). By contrast, the Brazilian sugar cane bioethanol industry utilizes just one percent of Brazil's arable land, and most expansion is occurring into low yielding pasturelands used for livestock production.

Box 3.2 Forests and Development – The Amazon Basin

The Amazon Basin exemplifies the wide range of development pressures that impact land-use decisions. Brazil's area in tropical forests has about 4 million square kilometers of tropical forests and deforestation rates remain high. Indigenous peoples live throughout the region, but most non-indigenous peoples settle at the fringes of the forests or along roads that bisect it, thereby putting development pressure on the forests. Logging, both legal and illegal, is a common cause of deforestation of some parts of the Amazon. Small landholders are often pushed deeper into the forests due to insecure land rights as they seek to clear the lands before cattle ranchers move in. From 1990 to 2003, Brazil's cattle herd grew from 27 million to 64 million, with much of their grazing land originating as forest land. The soy biodiesel boom has also consumed large swaths of Brazilian tropical forests. The land area in soybean production grew more than 50% from 1995 to 2003. These direct causes of deforestation in Brazil's Amazon are often driven by underlying macro-economic policies and conditions, such as land-use policies and price fluctuation of commodities (Taxin, 2008).

While biofuel crop cultivation generates a new source of revenue for landowners, it often contributes to soil and groundwater degradation, biodiversity and habitat loss, as well

as social conflicts. However as box 3.2 on the interlinkage between forests and development in the Amazon Basin illustrate, the outcomes for forests depends upon how policies are designed and implemented. In sum, bioenergy developments, as a subset of the sustainable development agenda, present both opportunities and challenges for socioeconomic development and the environment and have a number of potential impacts on forests and the rural poor who depend on forests for their livelihoods (Cushion and Dieterle, 2009).

Forests and Trade

Development of forest resources often leads to trade in forest products, such as timber, pulp and paper, and non-wood forest products. While this is not a new issue, as global forest resources diminish and demand for forest products increases, the linkage between trade policy and global forest governance is becoming increasingly evident as global forest resources diminish and the demand for forest products increases.

In 2000, the gross value-added in the global forestry sector totaled about US $354 billion, and in 2003, the global trade in wood products alone totaled about US$150 billion (Simula, 2008). The U.S., Canada, Japan, and Europe have been the leading markets on these commodities, with developing countries accounting for about 20 percent; however, countries such as India and China are gradually increasing their share of wood and wood product imports (Richards and Jenkins, 2007).

Even though society has reaped economic gains from forest products for centuries, it has only been within the past two decades that agreements were developed to shape the exchange of forestry products. As we will see in more detail in chapter 5, which analyzes the different types of forest-related instruments, the 1980s concern that tropical forests were being destroyed primarily by logging led to the formation of one of the first international agreements governing forests—the International Tropical Timber Agreement, which is better known for the International Tropical Timber Organization (ITTO) that it formed. In the trade arena, the ITTO represented the first turn away from viewing timber production as solely aimed at economic gain as it recognized sustainable forest management as one of its principles. In the 1990s, the ITTA, as a commodity agreement, was eclipsed by the World Trade Organization (WTO), which narrowed the focus to forests as a commodity in international trade, leaving the sustainable management component to the ITTO.

The WTO views forest products as one type of product among a range of 'Non-Agricultural Products,' leaving less opportunity to address issues that are specific to forests. However, while the WTO's focus on the forestry industry is concentrated more on purely trade principles compared to the ITTO, it also expanded governance of forestry trade. The WTO's structure around many narrowly focused agreements influences both timber production and trade. Agreements such as the Agreement on Technical Barriers to Trade (TBT) and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) increase the complexity of the relationships between forests and trade.

As referred to earlier, illegal logging was raised on the international agenda in response

to growing concerns of the associated adverse effects associated. The World Bank estimates that governments lose $5 billion in revenue and the legal forestry industry loses over $10 billion per year due to illegal logging (World Bank, 2008). Although there is no internationally accepted definition for illegal logging, it usually encompasses logging in protected areas, logging outside concession boundaries, and cutting more timber than the concession contract stipulates (Humphreys, 2006). Deforestation from illegal logging is located primarily in a handful of forest-rich developing countries, responding, amongst others, to demand for wood from abroad and domestic consumption. Cambodia, Indonesia, Malaysia, Solomon Islands, Papua New Guinea, Myanmar and the Philippines are among the list of countries that are recognized as having an illegal logging problem, while the Congo Basin, the Amazon Basin, Central America, and Russia have also experienced waves of illegal logging (Humphreys, 2006). The flow of illegally harvested timber products is not always a simple two-country production-consumption dynamic, and it can have a global scope through trade interactions.

The effect of illegal trade in timber products varies broadly depending on the offense and activity, resulting in environmental, economic, and social consequences. Environmentally, habitat is destroyed, increasing the threat of species extinctions reliant on the forests. Economically, forestry businesses around the world lose money when the markets are flooded with timber that has been produced at a lower cost by evading laws and legal fees (Humphreys, 2006). Government revenue is lost, which could affect a range of other government programs such as social services, health care and education. Furthermore, in some regions populations are displaced, especially those that are nomadic. Illegal logging may also alter the land and the livelihoods of those people dependent on it. However, on a more positive note, as we will discuss more thoroughly in chapter 5, an increasing number of governments and non-state actors are making additional efforts to curb trade in illegally harvested forest products.

Nevertheless, it was not until the 1990s that illegal logging was elevated from a national to an international issue, recognizing that progress to oppose such practices took time to be explicitly stated (Arts, 2008). There was significant hesitation to include this on the formal international agenda for fear that it might constrain forest-rich developing countries to make their own decisions. While it was framed as a trade issue the ITTA alluded to it as 'undocumented trade.' (Humphreys, 2006). In this process, the first steps pursued were supply-side approaches to stop illegal trade coming from producer countries. The United States government's commitment to address illegal logging in Asia provided an important impetus for the Forest Law Enforcement Governance (FLEG) process, which, as we will discuss in more detail in chapter 5, went on to create regional agreements in Africa and Asia for measures to strengthen efforts to combat forest crime (Humphreys, 2006).

Box 3.3 Forest Sector Governance

Forest sector governance refers to the ways in which officials and institutions (both formal and informal) acquire and exercise authority in the management of

the resources of the sector to sustain and improve the welfare and quality of life for those whose livelihood depend on the sector. Good governance is fundamental to achieving positive and sustained development outcomes, including efficiency of resource management, increased contribution to economic growth and to environmental services, and equitable distribution of benefits.

Good governance is characterized by predictable, open, and informed policy making based on transparent processes, a bureaucracy imbued with a professional ethos, an executive arm of government accountable for its actions, and a strong civil society participating in decisions related to sector management and in other public affairs – and all behavior under the rule of law.

Poor governance can have significant negative impacts on the environment, poverty reduction and social development. Poor governance in the forest sector impedes sustainable forest management, harms forest-dependent communities and distort forest economies (World Bank, 2008).

More recently, the U.S. took the step to ban illegal logging with the Combat Illegal Logging Act. This expands the Lacey Act, which not only condemns illegal exploitation of certain organisms within the U.S., but now denounces the importation of certain organisms that were obtained in a manner against a foreign law. This Act provides a significant step towards a supply-side measure to stop illegal logging globally and share the burden of enforcement. Recognizing the significant increases in demand for wood, now and in the future, the global wood market and the associated trade is undergoing rapid changes putting considerable and increasing pressure on the world's remaining natural forests. For example, in China total forest-products imports rose from 40 million cubic meters to almost 150 million cubic meters between 1997 and 2005 (World Bank, 2008). It is expected that demand, both domestic and from outside the country, will continue to rise, and forest-product imports to China are likely to double within the next 10 years. This growth in trade, both domestically and internationally, legally as well as illegally, offers strong incentives for public and private gains with severe potential risks of timber revenue channeled away from national development efforts, particularly from communities living in or near the forests. To counterbalance these challenges requires, amongst other measures such as afforestation, substantial improvements in forest law enforcement and governance as part of a coherent approach that is critical to capturing the full potential of forests in a sustainable manner.

Box 3.4 Forests and Trade – Russia

Since the collapse of the Soviet Union, the Siberian forests have been under increasing threat from illegal logging. Timber is sent by sea to Japan, through the Black Sea to Europe, from northwest Russia into Scandinavia, and by land into China. China both imports timber and exports timber products; an estimated two-thirds of its timber imports are re-exported. Chinese sawmills that process Russian timber often then export it to Japan and the U.S. (Humphreys, 2006). While Russia's forests are not as rich in biodiversity as

many tropical forests, they still provide important habitat for many species and they hold large amounts of carbon above and below ground. As of 2005, Russia had over 808,000,000 hectares of forested land, with a slightly negative rate of annual change. Of this, 622,000,000 are designated primarily for production (FAO, 2007). In the Northwestern forests, false claims on customs declarations allow high-value species to be exported as a low-value species, and then when exported to Sweden and Finland sold at a higher value, often competing with European forestry. The effect of this illegal logging has been lower roundwood prices in both Europe and Russia (World Bank, 2008).

Forests, Livelihood and Human Health

Important progress has been made in improving overall living standards in a significant number of developing countries. Over the past 40 years, child mortality rates in developing countries have dropped by more than a half, and malnutrition rates have declined by almost one-third. Despite these positive trends, poverty persists in many countries: 1.2 billion people live on less than a US$1 a day; 2.8 billion people live on less than US$2 a day (World Bank, 2008b). Mounting evidence demonstrates that poverty – especially in rural areas – can be reduced only by sustainably managing natural resources both for the income they generate and for the environmental services they provide. The forests of the world are one of the most important of these natural resources. In general, forests provide support for nearly half of the 2.8 billion living on US$2 or less a day. Thus, forests have a substantial potential in contributing to the United Nations Millennium Development Goals (Kaimowitz, 2008b).

The linkages between forest outcomes and poverty may not always be direct, nor even evident in some cases. The economic benefits of forests are frequently undervalued, and those benefits often bypass the poor, because of existing land tenure and participation conditions. In some cases, the poor would benefit from the removal of forests and conversion of forests to other land uses (such as agriculture) and in some of these cases, this conversion would be justified from a broader and economic and environmental perspective as well. However, decision-makers must recognize the long-term implications of changing to natural systems, especially for the poor, who typically depend upon their maintenance of these systems than others. There is considerable potential for the poor to benefit much more from different types of forest use, but this will occur in fact only if the right policies, institutions, and implementation capacity to include them are in place.

Around the world, forests have been used in a variety of manners to support subsistence livelihoods. Today the world is more urbanized than ever before, but it is estimated that globally nearly 350 million people, 60 million of which are indigenous, depend heavily on forests in a variety of ways for their subsistence. Poor rural families depend heavily on "wild" resources; in both forest-poor and forest-rich contexts, forest products are used to fuel, food, medicines, construction materials, fertilizers and cash. Reliance on these sources often increases in times of personal, family or social hardship, with these wild resources being especially important for women, children, and ethnic

minorities. In many cases, as people get richer, they use and sell fewer of the forest products that are considered inferior goods. However, most people in Sub-Saharan Africa have not gotten richer, resulting in growing markets for all forest products as populations and urbanization increase. Smallholders living in forest margins in diverse parts of the world earn 10-25 per cent of their household incomes from nontimber forest products, many of which are either undervalued or omitted completely from conventional economic statistics. (World Bank, 2008).

In developing countries alone about 1.2 billion people depend on agroforestry farming systems that contribute to agricultural productivity and generate income (World Bank, 2008). The chronically poor tend to live disproportionately in rural areas, leading to an overlap of severe rural poverty and remaining natural forests in developing countries. While there are many areas of chronic poverty without forests, and some forest areas without chronic poverty, the reality is that the correlation between forests and poverty is strong (Sunderlin et al, 2005). The convergence of the poor and forests is a result of many factors. Forests tend to be located in remote areas where the reach of the market economically is inhibited and technological progress is slow. Often, investments by national governments in rural areas is minimal. Furthermore, primordial poverty exists among traditional indigenous peoples whose dependence on forests is deeply rooted in history and long predates modern social change. And because access to them is open, forests are a magnet for the poor, as they provide new agricultural lands and economic opportunities for people with limited options. Commonly, forest-dependent people tend to be politically weak or powerless (Sunderlin et.al., 2006).

The heavy reliance of forest dwellers on forest resources for agricultural production, gathering of fuel wood, or other activities that gain economic returns, lead some policy-makers to believe that poverty and deforestation go hand in hand, creating a cycle that spirals downward (Arnold and Bird, 1999). However, this theory is widely challenged, with some observers noting the difference between poverty causing deforestation and arguing that the "poor are agents of deforestation, and that the causes of poverty lie in deeper structural factors." (Humphreys, 2006: 11; Chomitz, 2007). Others argue that wealthier landholders and their agricultural, logging, and industrial pursuits also contribute to destruction of forested areas (TFD, 2008).

Box 3.5 Non-Timber Forest Products

- Sierra Leone is one of the many places where people forage for fruit and nuts and hunt for game meat (Seeland, 1997: 90).
- In the Pangi Valley of India, medicinal plants and herbs were collected by more than 86% of the population involved in a survey. In this remote area, the alternative income provided by selling these plants composes between 10 and 20% of household cash income (World Bank, 2008).
- Mexico's southern mountainous region has both a large indigenous population and high rates of poverty. Roughly three quarters of Mexico's forests are communally-owned ejidos, many of which engage in alternative livelihoods that also allow them to leave the forests intact. Activities such as gathering mushrooms, collecting resin, and bottling water are used to provide greater quality of life without degrading the natural resource base (World Bank, 2008).

The UN Food and Agriculture Organization estimates that in 2008 more than 2 billion people relied on wood energy as their dominant energy source. Fuel wood is used to cook food, make charcoal or produce biofuels (FAO, 2008). Collecting fuel wood is physically hard and time-consuming work, an arduous burden particularly on women who typically are also responsible for collecting water, caring for children, doing agricultural work, and handling the myriad other tasks that make up the day of developing world women. As pressures on forests develop, the distances traveled, collection times, and other demands on women also increase (World Bank, 2008c).

Ever since the late 1970s, concern over the "fuel wood crises" facing the world's poor has been widespread (Agrawal, 2001). Some populations rely heavily on charcoal and wood for fuel, such as in Haiti, where it is one of the main causes of the country's deforestation (World Bank, 2008). Many reforestation efforts fail because the need for wood drives people to cut down trees before they have a chance to mature. As a study about forest governance suggests "the goal of forest conservation has historically not been met when in conflict with land use changes driven by demand for food, fuel, and profit," leading to the need for better governance (Agrawal et.al., 2008: 1462).

As noted earlier, the plight of indigenous peoples and other forest dependent peoples is also closely tied to forests. Their ancestry, spiritual relationships, and culture are deeply integrated with the forested regions they live in. In Brazil, as one example, the indigenous rights movement grew simultaneously with the environmental movement spurred by concern over the deforestation of their homeland (Domask, 1998). Tropical deforestation stimulated international concern for indigenous livelihood interests, including the ability to retain their identities, uphold their rights, and protect access and tenure to lands. In frontier areas, disagreements and threats often erupt over land-use decisions, especially where indigenous peoples are excluded from government decision-making (Domask, 1998).

Box 3.6 UN Declaration on the Rights of Indigenous Peoples

In October 2007, the United Nations General Assembly adopted the UN Declaration on the Rights of Indigenous Peoples. The declaration, while non-binding, sets international standards for the protection and promotion of the individual and collective rights of Indigenous Peoples, including their rights to land and natural resources, and advocates a human rights-based approach to development as it applies to Indigenous Peoples (UNGA, 2007a).

Closely related to the issue of human livelihoods are the linkages between forests and human health. The health concerns of the world's 350 million forest dwellers are intertwined with their surrounding ecosystem, which provides food for nutrition, water for drinking, and fuel for cooking. Forests are important repositories of medicinal compounds from wild organisms (Bryant, 2002). This role is the basis for many arguments for rainforest conservation (Seters, 1997). Forest medicines offer several benefits. First, their continuing use represents a knowledge resource of considerable significance for the world's current and future pharmacopoeia. Second, the plants and animals themselves are the physical physical reservoir for this future use. Third, they represent the only pharmacy available in remote areas where 'modern' medicine is not available. Cunningham (1993) estimates that 70-80 per cent of Africans consult traditional medicinal practitioners for health care and expects the demand to rise.

A wealth of indigenous and local knowledge about forest medicines exists (Anyiam, 1995). The economic value of traditional medicines is considerable but difficult to quantify. At the most disaggregated level, Kaimowitz (2005) reports that USD 75 billion of pharmaceuticals of natural origin are sold each year. A vast literature considers the distribution of profits coming from forest medicines. Shanley and Luz (2003) have argued that global pharmaceutical development receives much greater attention than the needs of local communities. Although pharmaceutical companies incur significant expenses in discovery, laboratory research, processing, and distribution there remains a vast asymmetry in the distribution of profits between the companies and the forest communities in and around medicinal plant collection areas (Mendelsohn and Balick, 1995). The World Conservation Union (IUCN) concludes that more than 20,000 species are used as medicine worldwide, and half of these are under threat of extinction. Many authors have recounted the threats to medicinal plants from habitat destruction, overharvesting, increasing commercialization, and loss of indigenous knowledge, as well as population increase, forest fires, shifting cultivation, and overgrazing (Chivian and Sullivan, 2002)

Forests can also have a negative impact on health. Fuel wood used for cooking, as referred to above, poses respiratory health hazards, especially for women and children (Colfer, Sheil, and Kishi, 2006). Smoke and haze also originate from forest fires, such as the Indonesian fires of 1997-98, which have caused respiratory problems for people in Malaysia and Singapore, causing an estimated $148 million in health costs (Applegate, et al., 2002).

The literature on the linkages between forests and human health is growing; however, this issue has not been elevated to an international level from a governance perspective. It is thought that some viral diseases, such as HIV/AIDS, originated in the forests or forest animals. There have been mixed results as to whether deforestation decreases the pathogens and vectors because of habitat destruction or whether the level of disease more often increases after cutting down the trees (Colfer, Sheil, and Kishi 2006). Additionally, disease and health impacts on forest inhabitants are often intertwined with nutrition, gender inequities, poverty, and political conflict, making causal relationships difficult to prove (Colfer, Sheil, and Kishi, 2006). Despite the important linkages between forests, health and livelihoods, the international health regime, as one possible avenue, has dealt hardly with forests directly.

Box 3.7 Forest, livelihoods and Human Health – Indonesian Fires

Forests affect health and livelihoods in a variety of ways, and one extreme example of negative health impacts has arisen in Indonesia. As of mid-2000, an estimated 30 million Indonesian people depended directly on forests for their livelihoods. These populations undertake traditional activities like fishing, hunting, and cultivating crops; they also gather non-timber forest products such as rattan and honey. Furthermore, millions of people rely on plants and herbs from these forests for medicines. Indonesia's forests have been and still are threatened by illegal logging and the conversion of forested lands. The most biodiverse forests in Indonesia—the lowland tropical forests—are the most threatened (FWI/GFW 2002). By 2000, 40 per cent of the forests that existed in 1950 had been cleared, and the rate of forest loss was still accelerating. This deforestation took place primarily under the government of President Suharto, who ruled Indonesia from 1967 to 1998. An important implication is that logged forests, degraded forests, and scrub on deforested land are more fire-prone than undisturbed tropical moist forests, and so the degradation that took place under Suharto, when combined with droughts associated with El Nino, fueled massive forest fires. Forest fires have occurred naturally in the region throughout history, but the recent deforestation and degradation have meant that fires are no longer small, with a slow spread, but instead have been massive outbreaks (FWI/GFW 2002). Five major fire events have occurred since 1982, causing haze that affects Southeast Asia, Singapore, Malaysia, and Indonesia itself. The fires create clouds of noxious gases that darken skies, pollute the air, and release harmful greenhouse gases. This transboundary haze has caused adverse health effects for 20-70 million people, 40,000 of which have been hospitalized for respiratory and other haze-related ailments. Despite the widespread health effects, the Indonesian government has not dealt with forest use and conversion in a way that adequately addresses the problem (World Bank, 2008).

Forests and Security

While forests contribute positively to human security through the provision of basic resources, they can also have the opposite effect in some regions by contributing to violent conflict (World Bank, 2008). The past twenty years has seen violent conflicts in approximately 40 per cent of the world's tropical forested countries, including those in Latin America, Africa, and South East Asia (CIFOR, 2008). One of the drivers of these conflicts include trade in illegally harvested forest resources, including timber and plant species to finance insurrections by rebel groups or to pay for weapons to maintain power, the use of forests for drug cultivation and distribution, and unresolved or unenforced land rights claims.

The impacts of forest-related conflicts pose a direct security threat to those living in the region and can have destabilizing effects in neighboring regions or in countries linked by trade relationships (CIFOR, 2008). In the 1980s, the interest of developed countries in illegal logging was perceived by some developing countries as either trade barriers in disguise or as an attempt to decrease the sovereignty rights by making it an international rather than a domestic issue (Humphreys, 1996). More recently, growing concern over environmental degradation and human rights violations associated with trade in illegally harvested forest products, including timber and illicit drugs, has lead to increased ad-hoc international intervention into security-related forest issues worldwide. For example, illegal logging, as noted earlier, has perpetuated violent conflict in countries including, Cambodia, Democratic Republic of Congo, Indonesia, Liberia, Myanmar, and Sierra Leone (CIFOR, 2008).

Conflict timber can be a source of violence between loggers, communities, and government officials who all lay some claim to the resource (Jarvie et al., 2003). Conflict timber often heightens or prolongs existing crisis, because combatants can quickly and easily accumulate a significant amount of capital for war from conflict timber (OECD, 2005). During conflicts in West Africa, Liberia and Sierra Leon were significantly deforested by the Liberian government to finance weapons. This use of natural resources, such as illegally harvested wildlife, timber, petroleum, minerals and blood diamonds have been occurring at increasing levels in many parts of the world. The World Trade Organization has largely ignored this destructive form of illegal resource exploitation. In some countries, trade in illegal timber, as analyzed above, reaches high into the executive government powers, as can be noticed from Liberia's past experience when illegal timber trade was elevated to the Presidential level.

Box 3.8 Forests and Security – Liberia

Forestry made up half of Liberia's exports in 2002, but the UN Security Council banned the export of forest products from the country due to the widespread human rights abuses associated with the trade. During two decades, ongoing conflict caused the economy to collapse, but timber remained critical and funded conflict throughout the country and led to the coinage of the phrase "conflict timber" (Blundell 2005).

Charles Taylor, the former President of Liberia, distributed logging concessions to warlords and a member of the Ukrainian mafia, and the Oriental Timber Company—conducted arms deals on his behalf. Private security forces were hired to protect logging interests, and human rights abuses and massacres resulted. The violence tied to Taylor's logging operations reached unprecedented levels, and in 2003 the U.N. Security Council imposed sanctions on all Liberian timber (China, the largest importer of Liberian timber, tried to block the sanctions). Shortly afterward, Taylor's regime collapsed. Even despite the downfall of Taylor, the UN is still concerned that in the future conflict could be related to the timber trade and allocation of resources (Blundell, 2005).

In addition to illegal logging, forest governance, when addressing security concerns, must also deal with other illegal activities occurring in forests, such as illicit drug cultivation. Since these activities often occur in remote areas and removed from the forces of the law government authorities located in urban areas far from these forest regions lose control. In some cases, government officials are engaged in drawn-out, and sometimes violent, conflict with self-appointed leaders or armed groups over control of the region.

In Colombia, the Revolutionary Armed Forces of Colombia (FARC) occupy an estimated 500,000 square kilometers of Colombia's tropical forest. Since the early 1980's Colombia's government, with periodic assistance from the United States, has worked to end FARC's control over the region and curtail trade of illicit drugs cultivated in Colombia's forest regions (FAO, 2005). Large areas of tropical forest regions in countries including Bolivia, Colombia, Peru, Laos, Myanmar are cleared each year for illicit drug cultivation, primarily coca and opium. The clearing of land for drug cultivation, which is often done by using slash and burn approaches, has significant environmental impacts including habitat destruction, loss of biodiversity, and air and water quality degradation. Illicit drug cultivation also threatens human security and human well-being in both drug producing and drug consuming regions of the world.

Conflicts over forestland tenure rights can also create instability, foster violence, and threaten human security. Forestland tenure conflicts are related to how forest resources are used, including rights to use the land, rights to control how land is used, and rights to transfer use of the land. Conflicts are also related to who is granted the rights to use forest resources, including a private party, a community, everyone, or the state (FAO, 2005).

Box 3.9 Typology of property rights

Property rights can be viewed as reflective of social relations. Property rights are rules that govern relations between individuals with respect to property and they should therefore be defined by the community or the state to which such individuals belong. Most important for sustainable development is that property rights are deemed secure A common typology of property rights distinguished among private, common and public or state property rights:

- Private property rights: Individual or "legal individual" holds most if not all the rights. Property can be leased under a contract to a third party

- Common property rights: Group (for example, community) holds rights. Group can manage property and exclude others. Rules are important to manage and distribute resources

- Public or state property rights: State holds the bundle of rights

Source: World Bank, 2008

Forest tenure conflicts often arise in areas where pressures by government or the private sector to develop forestland for industrial, agricultural, or residential uses threaten traditionally held forest use rights by indigenous or forest dwelling communities (World Bank, 2008). In forest areas including Brazil, Bolivia, and Indonesia, conflicts between forest dwellers and government or private sector agents has resulted in threats, intimidation, and loss of human life (World Bank, 2008).

The linkages between forests and human security are multi-dimensional and subjective to a complex set of considerations, such as economic and trade, governance, environmental and human rights issues. Adding to the complexity, forest-related conflicts are not always motivated by the use of forest resources themselves; sometimes forest resources are tools used to perpetuate conflicts stemming from ideological, legal, rights-based, or other grievances (World Bank, 2008). Like other commodities, such as minerals and diamond, assets generated from illegal timber, can fuel guerilla warfare against ruling parties. As a result, forests-related security issue cannot be efficiently and adequately addressed without considering a full range of economic, environmental, social factors that are in play.

Forests and Biodiversity

The linkages between forests and biodiversity are widely acknowledged. Forests are home to at least 80 percent of the world's remaining terrestrial biodiversity and are a major carbon sink regulating climate change (World Bank, 2008). Forests also help to maintain the fertility of the soil, project watersheds, and reduce the risk of natural disasters, such as floods and landslides. Many commentators have long observed that along with other challenges global deforestation and degradation threaten biodiversity and forest-related ecological services. The rise of tropical deforestation and degradation coupled with increasing demand for forest resources put a greater emphasis on forests

as a biodiversity resource. In humid and sub-humid tropical countries, the mismanagement of woodlands contributes to significant soil losses estimated to be the monetary equivalent to about 10 percent of their annual agricultural gross domestic product (GDP) (Bhargava, 2006).

Forest biodiversity has value for four basic reasons: utilitarian, aesthetic, moral, and ecological (Botkin and Talbot, 1992). The utilitarian justification for biodiversity means that there are products to be obtained from natural ecological systems that can provide direct economic or social benefit. The aesthetic justification for conserving and sustainably using biodiversity refers to the value that people face on seeing, hearing, touching – experiencing – nature and its diversity of life forms. The moral justification refers to the belief, as stated in the UN General Assembly World Charter for Nature 1982, that species have a moral right, intrinsic value, to exist. Lastly, the ecological justification means that diversity is important to the persistence of ecological systems, including forest ecosystems.

Forests have many properties, related to their high rates of primary productivity and biodiversity, which distinguish them ecologically from other ecosystems. In the annex to decision II/9, the Conference of the Parties to the Convention on Biological Diversity recognized that "Forest biological diversity results from evolutionary processes over thousands and even millions of years which, in themselves, are driven by ecological forces such as climate, fire, competition and disturbance. Furthermore, the diversity of forest ecosystems (in both physical and biological features) results in high levels of adaptation, a feature of forest ecosystems which is an integral component of their biological diversity. Within specific forest ecosystems, the maintenance of ecological processes is dependent upon the maintenance of their biological diversity". Forests are comprised of multiple ecosystems that are associated with variable microclimate conditions across broad landscapes (Thompson, 2009).

Depending on the capacity of the forests to cope with the degree of change, the characteristic taxonomic composition, vegetation structure, and rates of ecosystem processes may or may not be altered. Forest ecosystems may change in response to disturbances, and the new state may or may not supply the same goods and services as the original state. Further, if species diversity is positively related to stability and resilience of forest systems, then species losses will likely have consequences for the long-term production of goods and services. Biodiversity is often considered, especially within the forest management community, as simply a list of species present at a location. The term can also be used in the context of providing habitats for species of some particular value of interests to people, and in this sense biodiversity is a 'good' produced by the ecosystem (Thompson, 2009).

As we learned from the wedge diagram in chapter 2, particularly in the 1980s concern over biodiversity loss in tropical forests provoked an explosion of international interest over deforestation and degradation (Humphreys, 1996). During this period forest conservation was understood to mean 'no use,' recognizing its intrinsic value of conserving biodiversity and preventing species extinction.

Box 3.10 The World Bank's Revised Forest Strategy

The initial rationale for the Bank to engage in forestry sector in the 1970s was based on addressing worldwide declining wood supplies and the dependence of the rural poor on wood energy. Following a period of strong criticism of civil society, especially environmental NGOs, who regarded World Bank investments as strong contributors to global forest dynamics, the Bank's engagement in productive forest management decreased significantly. In the early 1980s the World Bank received much international criticism for having funded projects that resulted in severe deforestation in the Amazon, Congo and Malaysia (Price, 1989). A controversy over a forest sector loan to Ivory coast in 1990, which NGOs claimed would open 0.5 million hectares of rainforest to logging, caused the World Bank to suspend all new forestry lending while a more environmentally friendly policy was being prepared.

When the World Bank reformed its forest strategy in 1991, its new resource conservation strategy sent a strong message to the international community that the World Bank was concerned with forest conservation issues, and not just development. A critical component of the World Bank strategy was "not to finance commercial logging operations or purchasing of logging equipment for use in primary tropical moist forest." (World Bank, 1991). The strategy reflected rising international concern about the rate of tropical deforestation and strongly emphasized the need to preserve intact forest areas. While the 1991 Strategy recognized the role that forests could play in poverty reduction and the importance of policy reforms in containing deforestation, its hallmark was a strong commitment not to finance commercial logging in primary tropical moist forests.

In practice, this emphasis on safeguarding forests has meant that little attention was paid to the active management of natural forests in the tropics and therefore to the poverty-reduction potential of forests. In 2002 the World Bank adopted a revised Forests Strategy, integrating the different dimensions of sustainable development, which allows the World Bank to engage more proactively in the forest sector to help attain the goal of poverty reduction without jeopardizing forests environmental and economic values intrinsic to sustainable development. The revised strategy was founded on three equally important and interrelated pillars:

- Harnessing the potential of forests to reduce poverty in a sustainable manner
- Integrating forests more effectively into sustainable development
- Protecting vital local and global environmental services and values

The 2002 Forests Strategy marked a shift from outright prohibition of World

Bank financing of commercial logging operations in primary tropical moist forests to an approach of improved forest management with targeted conservation of critical natural habitats in all types of forests and as such aims to ensure an integrative approach to sustainable forest management (World Bank, 2004).

While the important contributions of forests to ecosystems is widely acknowledged by the scientific community, the monetary value of the loss of ecosystem services or negative externality in forests is not commonly calculated or paid for by forest resource users. However, as we will examine in more detail in Chapter 5, there are some emerging schemes and policies of services and products involving payment for ecosystem services (PES). These utilize the competencies of the market to minimize negative externalities that result from "uncharged" use of common goods by creating a market for environmental goods and services (PROFOR, 2007). This emerging trend gives land-holders more options, and possibly incentives, to inform their land-use decisions. Watershed protection is an important service involving forests and has received considerable attention for payment schemes. These schemes involve payments to upstream land users for improving water quality and quantity through appropriate land-use practices. Such arrangements tend to be most effective in small watersheds, where service providers and beneficiaries are able to interact and the information flow is relatively smooth. At larger scales, more complex arrangements become more necessary. In most cases, the payments are from utility companies to land users (FAO, 2009).

Box 3.11 Costa Rica's Payment for Environmental Services Program

Costa Rica has one of the most renowned incentive programs to conserve forested land. Although the country a high deforestation rate in the 1970s and 1980s due mostly to the expansion of cattle ranching, the heightened international awareness of deforestation and the nascent ecotourism industry provided impetus for protecting privately-owned forests. In the mid-1990s, the country expanded an incentive program that encouraged reforestation for timber production to include support for conservation and sustainable forest management. Shortly after, the program began to pay individual landholders for the environmental services their land provided, namely carbon sequestration, hydrological services, biodiversity conservation, and scenic beauty (Kaimowitz, 2008).

The Forestry Law, Law 7575, was passed by the Costa Rican national assembly in 1996, establishing the legal and institutional framework for this Payment for Environmental Services (PES). Law 7575 also established the National Fund for Forest Financing (FONAFIFO), a semi-autonomous agency with both public and private sector members on its board. FONAFIFO handles the majority of the

responsibilities associated with this program; it designs the procedures, collects funds from various sources, and keeps the records and statistics. In 2003, it also added the functions of directly receiving applications from landowners, signing contracts, and monitoring compliance. In addition, certified foresters, called regents, help landowners with developing their forestry plans, applying for funds, and monitoring compliance (Pagiola, 2006).

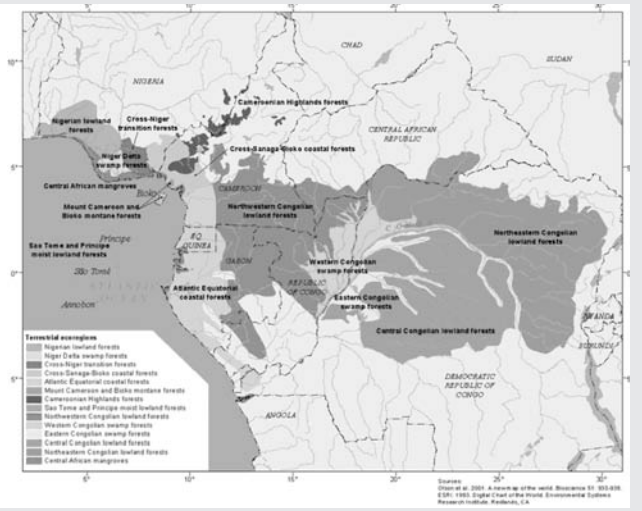
The PES program pays landholders $240 per hectare to keep their land forests for five years, which works out to be about $48 per hectare per year for five years if they meet their annual commitments. To participate, landholders must make a forest management plan that lays out steps to avoid fires, hunting, grazing, and logging in the forest. From 1997 to 2006, 6,062 contracts were signed between the Costa Rican government and private landholders for a combination of conserving natural forest, managing forests, reforesting, and establishing agro-forestry systems, resulting in 471,392 hectares of forest in conservation and 28,066 hectares in sustainable management (Kaimowitz, 2008). Since 1998, 90% of the contracts were in strict management (Pagiola, 2006).

For this program, over $200 million was invested over the last decade (Kaimowitz, 2008), with transaction costs for FONAFIFO and regents consuming between 19% and 25% of the total program cost (Wunder, 2006). These funds are mostly from a gasoline tax, and the rest is from a combination of water users, the German and Norwegian governments, World Bank loans, the Global Environment Facility, and European companies (Pagiola 2006). Even with the diverse sources of funding, there have only been sufficient funds to cover roughly one third of the land-owners that want to participate (Kaimowitz. 2008).

The idea for PES was originally conceived for individual ecosystem functions, such as biodiversity and watershed protection. As the dialogue on forests has evolved, while avoiding deforestation has remained important from a biodiversity perspective, particularly forest carbon sequestration has become more attractive from a political stance.

Box 3.12 Forests and Biodiversity – Congo Basin

Forests ecosystems house more biodiversity than any other terrestrial ecosystems, and in particular, tropical forests are rich in plant and animal species. The Congo Basin is the second largest contiguous tropical rainforest in the world, after the Amazon, and it composes a quarter of the world's tropical rainforests. Roughly 24 million people live in the Congo Basin, spread among six countries (CBFS, 2008). Even though Africa is urbanizing at a rapid rate, the rural population is still rising, putting pressures on areas such as the Congo. The Basin is made up of varied ecosystems, from savannas to forests and from rivers to swamps, each with its own species. To protect these critical ecosystems, in Johannesburg in 2002 a partnership of governments, civil society, and private actors created a non-binding agreement to sustainably use this land.



Forests and Climate Change

Climate change represents yet another strand in the web of linkages constituting the system of Global Forest Governance and one that is becoming increasingly important. Both the Stern Review (Great Britain Treasury, 2007) and the IPCC report (2007) contributed to shifting the political attention and the international forest agenda toward the notion that forests can contribute to a cost-effective climate change mitigation mechanism. However, notwithstanding this opportunity, given the scale of emissions from forests, forest mitigation measures not only provide large prospects but also a daunting task. Giving testimony to this, the UN Secretary General Ban Ki-Moon stated:

> *"Climate change cannot be won without the world's forests. This, however, will be a complex and challenging feat in terms of setting up incentive structures and implementation mechanisms, and will require a long-term commitment. But nonetheless, it is one of the best large-scale investments we can make against climate change that could result in an equally large scale dividend." (Ki-Moon, 2008)*

As the global sustainable development agenda has turned to focus on climate change mitigation in the 21st century, linkages between forests and climate change have become a prominent lens through which forests are viewed.

Until recently, political discussions about global warming paid scant attention to forests. Most policymakers viewed emissions resulting from forest loss as hard to measure, monitor, and control. They felt any benefit from efforts to reduce them would be short-lived and suffer considerable leakage (i.e. less carbon emissions in one place would lead to more emissions someplace else). Many worried that focusing on tropical deforestation would reduce pressure on richer countries to lower their emissions. There were fears that including forests in trading schemes would flood the carbon markets and make other mitigation measures unprofitable (Lejour and Manders, 1999). As a result, the Kyoto Protocol provided few incentives for afforestation and reforestation and none to maintain existing forests (Eliasch, 2008). Nonetheless, as we will analyze in more detail in chapter 5, recent interest in measures to Reduce Emissions from Deforestation and Degradation (REDD) has increased markedly. Forest rich developing countries have come to realize that they can contribute to addressing the climate problem through improved management of their forests, and that it is increasingly likely that there will be payments for the important ecosystem service of carbon storage. Analysts, such as Stern, and policy-makers alike have realized that the emission reductions needed to avert catastrophic climate change are so large they will be almost impossible to achieve without reducing forest loss (Kaimowitz, 2008).

By the end of 2008, the Eliasch Review reinforced the central proposition of the Stern Report that urgent action to tackle the loss of global forests is a critical need to be a central part of any future international deal on climate change. It claims that a deal that provides international forest financing not only reduces carbon emissions significantly, but also benefit developing countries, support poverty reduction and help preserve biodiversity and other forest services. "If the international community does nothing to reduce deforestation estimates indicate that the global economic cost of climate change caused by deforestation could reach USD 1 trillion a year by 2100" (Eliasch Review, 2008).

The latest IPCC report indicates that the world must stabilize the atmospheric concentration of greenhouse gases at 450 ppm CO2e to avoid temperature increases above 2 degrees Celsius (IPCC, 2007). Recent research indicates that this will require the world to reduce annual greenhouse gas emissions, relative to business as usual, by approximately 17 Gt by 2020 (McKinsey, 2009). Recent IPCC reports indicate that land use change, mainly deforestation, contributes to about 20 % of the greenhouse gas emissions from anthropogenic sources between 1989 and 1998 (IPCC 2000, 2007). As can be seen in the figure below, a more nuanced interpretation reads that regions vary substantially in their contribution to CO2 emissions stemming from deforestation and degradation.

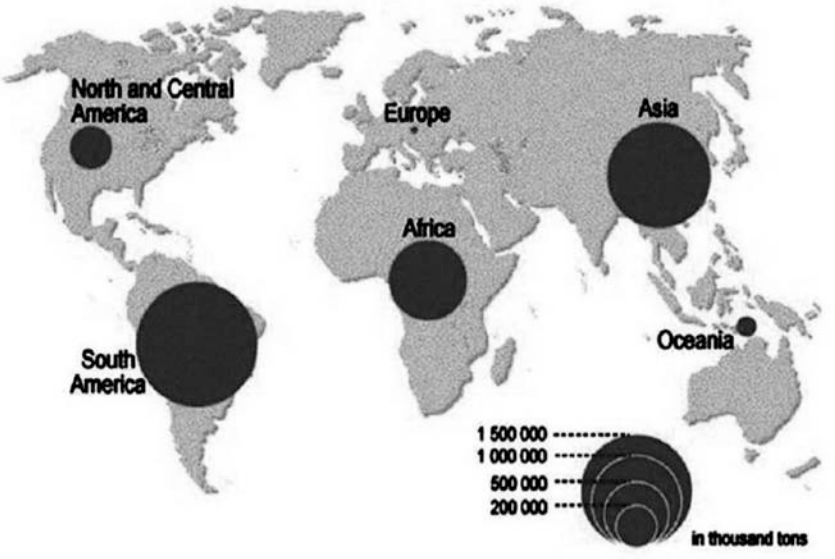


Figure 3.2 CO2 emissions from land use change, 2005 (Source: CPF, 2008)

The amount of carbon that a forest can store depends on the type and characteristics of the forest. Tropical forests, accounting for approximately 40 per cent of the world's forest area, hold more carbon than temperature zones and boreal forests combined (Bonan, 2008). Forests and other terrestrial sinks annually absorb 2.6 GtC, while deforestation and land-use activities emit approximately 1.6GtC, significantly reducing the role forests play as a net carbon sink (IPCC, 2007). The figure below shows the simultaneous functions of forests to act as a source of emissions and a sink through sequestration. Tropical forests have remained in the international limelight partially because they contain twice the carbon stock in their vegetation and soils than any other biome or the atmosphere (LULUCF SPM).

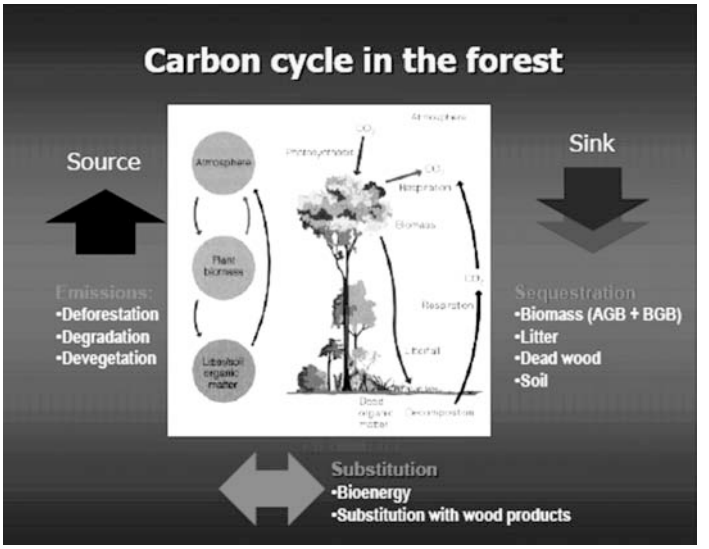


Figure 3.3 Forest Carbon Cycle

Source: Blaser and Robledo 2008.

Another manner in which forests interact with the carbon cycle is through substitution (TFD, 2008b). Carbon is stored in forest wood products produced from the timber. Since it is a renewable resource, the carbon content of forests is temporarily reduced after harvesting, but it will regenerate. Carbon is not released into the atmosphere as it is when burned, but it can store it for decades in housing lumber or furniture. Wood can also substitute for more energy-intensive materials, such as steel or plastics.

In addition to mitigation, forests play a key role in climate change adaptation for both natural ecosystems and for humans (TFD, 2008). Forest areas and their wealth of biodiversity provide resilience to changing precipitation and temperature. They also help buffer regions from extreme weather events. Many forest communities are less affluent and more vulnerable to climate impacts (IUFRO, 2009).

Box 3.13 Adaptation and Coastal mangroves

Coastal mangroves forests are a widely utilized resource, providing nurseries for important fish species, for example, and helping to protect coastal areas from floods and coastal storm surges. Although such ecosystems are highly valued, the area of mangrove forests declined significantly in the last half-century. Under all scenarios of climate change, coastal storms are projected to increase in most regions. As erosion rates and the frequency or intensity of storms increase in the tropics, the coastal protection function of mangroves will become increasingly critical. Mangroves forests, however, are themselves vulnerable to climate change, their persistence depending on accretion rates relative to sea level. While mangroves appear to have adapted to sea level rises that have already occurred, it will be harder for them to do so as the sea level rises more rapidly and as conversion pressures increases.

Source: IUFRO, 2009

As referred to above, international discussions are nowadays revolving around Reducing Emissions from Deforestation in Developing Countries, termed "REDD." The basic idea behind this concept is that countries that are willing and able to reduce emissions from deforestation should be financially compensated for doing so (IWG, 2009). Even more recently, REDD discussions have transformed to REDD+ recognizing the potential of sustainable forest management, afforestation, reforestation and restoration of degraded lands. In addition to avoided deforestation, also other forest-related mitigation measures are gaining ground within the evolving REDD negotiations. However, within these ongoing negotiations, there remain strong demands by some leading forest nations and donors alike to reduce the complexity of the forest mitigation measures potential to avoided deforestation only.

The total forest carbon stock at any time is determined by two factors: the total forest area, and the carbon per hectare of forests (carbon density). This means changes can be measured by two factors: area and carbon density. Further, one can differentiate between activities that reduce negative change, and those that enhance positive change.

This yields four conceptually different ways of boosting forest carbon stocks. These are deforestation, afforestation/reforestation (A/R), degradation, and restoration/rehabilitation.

Changes in:	Reduced negative change	Enhanced positive change
Forest area (hectare)	Avoided deforestation	Afforestation and reforestation (A/R)
Carbon density (carbon per hectare)	Avoided degradation	Forest restoration and rehabilitation (carbon stock enhancement)

Table 3.2 Possible scope of REDD mitigation measures

The debate on the scope of credible activities in REDD has evolved significantly over the last years. Initially, the focus was on 'reducing negative change', at first only from deforestation (COP-11 in 2005 in Montreal) then also from forest degradation (COP-13 in 2007 in Bali). In Bali, the Parties also agreed to explore options for 'enhancement of forest carbon stocks', that is, to possibly also reward the 'enhanced positive changes' through forest rehabilitation and restoration.

Enhancing the carbon stock can be viewed as the positive complement of forest degradation – the latter reducing, the former increasing carbon densities.

Similarly, A/R can be seen as the positive complement of deforestation. In both cases, the central element is not only to stop negative changes (deforestation and forest degradation), but to go further and reward additional positive changes (A/R, forest restoration and rehabilitation). In the current climate change negotiations a coalition of nations, including powerful donors, such as Norway, and forest nations, such as PNG, focus primarily on avoided deforestation measures (IWG, 2009). As the Eliasch Review (2008) notes emissions reduction targets can only be monitored effectively if carbon emissions are estimated robustly and uncertainties are managed and quantified.

Although the REDD negotiations primarily focus on tropical countries, and within that mostly on countries with high forest cover and high deforestation (see also chapter 4), a recent Australian publication has conducted research to develop a methodology for measuring the carbon carrying capacity of Australia's forests and woodlands. The report shows that these forests can make a far more significant contribution to reducing greenhouse gas emissions and pulling carbon dioxide out of the atmosphere than previously thought. Excluding these measures from the REDD discussions, once more shows the subjectivity of the boundary judgments, in this example of the climate change negotiators, and also the temporary nature of boundary judgments. The study also claimed that policy distinctions should be made between natural forests and plantations as the former are more resilient to climate change and disturbances than plantations

because of their genetic, taxonomic and functional biodiversity. The green carbon in natural forests is stored in a more reliable stock than that in plantation forests, especially over ecological time scales (Mackey et.al., 2008).

Economic analysis indicates that reducing net deforestation could contribute as much as 6 Gt, or one third of the needed abatement between now and 2020. Although figures vary considerably, the average opportunity cost per ton CO2e abated in the forestry sector is estimated to be roughly 9 euro, making it more costly than improving energy efficiency but much less costly than the typical cost of abating emissions by decarbonizing the energy supply in developed countries (IWG, 2009).

Adding to the complexity of the system of global forest governance, an aspect which is often overlooked in the context of forests and climate change, is the importance of recognizing that in many countries where REDD is likely to be important, illegal and uncontrolled forest exploitation, as noted earlier, is a major cause of forest loss and degradation. Unless these issues of forest governance are addressed in a holistic manner and governance capacity is improved, it is unlikely that economic incentives alone will be successful (Saunders, 2008).

Reinforcing the tendency towards simplification, of the many forest-related climate change mitigation proposals being discussed, relatively few address broader related forest-issues. Even though global forest discourse as a whole is making some progress recognizing the myriad forest-related linkages, such as the importance of livelihoods and biodiversity, the climate change discussions have a tendency to revert back to the single-issue perspective that is characteristic of the system of global forest governance (TFD, 2008c). The pervasive poverty, corruption and social tension in forest areas, as discussed above, have not only generated violent conflict and a concentration of forest wealth, but create a situation where new, additional investments risk, such as those financed within a REDD framework, catalyzing new discord and conflict unless they are carefully and equitably targeted (De Koning et.al., 2008). Clear rights and governance structures are thus not only required for investments to achieve climate change goals, but unless they are in place there is a real risk of inadvertently undermining existing progress on human rights of forest dwellers (Colchester, 2008). Designing effective forest interventions is a complex task that needs more than technical input and will need a comprehensive approach by the international community to become more effective (CIFOR, 2008).

As recognized in The Forest Dialogue Declaration it is important to remember that forests are much more than pools of carbon: they house a large part of the world's biological wealth, perform the important role in the provision of water, and offer other ecosystem services (TFD 2008). Although the current climate change negotiations focus their attention primarily on the mitigation potential of forests, the need for adaptation seems inevitable, even under the most conservative climate proposals. While global forest discourse embraced the social development aspect of forest policy, the climate agenda has yet to take that step to adopt it as one of its key elements, largely because it is complex even without it.

3.3 Concluding Thoughts

As many commentators have argued, global change is needed in the way land is used and commodities are produced. Demand for agricultural commodities and timber will continue to rise as the world population grows and becomes wealthier. As a result the competing claims for land use will increase the pressure on forests worldwide when the potential of agricultural productivity enhancement is not captured fully. National and international policies will need to shift the way demand for commodities is met away from deforestation and towards more efficient and sustainable methods that ensure forest nations and communities grow and prosper. Improvements in agricultural productivity and the sustainable management of forests need to play a key role to release the current pressures on forests. Consumer countries, as we will examine in the next chapters, can also provide incentives for sustainable production of timber and other commodities through preferential procurement of sustainably-produced products and increased consumer awareness.

It is clear that the system of global forest governance impacts much more than just the forest sector or those living in the forests. It is connected with human well being, both for forest and non-forest dwellers; international trade; human health; economic growth and development; natural resources and ecosystem health; and human security. Similarly, each of these related issues are connected to each other: human and environmental well-being is directly related to trade, economic stability, governance, and natural systems health. This complexity challenges the current system of global forest governance and does not allow for continued "siloed" or singular lens viewpoints of forest issues. Simplification does not work when adjustments in one area tend to create imbalances in others (Teisman et.al., 2008). Solutions that address the climate change mitigation potential through government-led programs may exacerbate the situation of indigenous peoples, just as trade solutions that address the concerns of one group of nations may be unacceptable trade terms to another group.

For these reasons, a critical determinant for success of the system of global forest governance is to manage, rather than eliminate, complexity, and apply a coherent approach to address the broad-ranging issues therein. What we have come to realize is that in fact we must match the complexity of our management system to the complexity of the problem. As we will develop in more detail in chapter 6, this will require a new approach if we are simultaneously and effectively to address the problem of declining forests and the multiple issues that connect to them. As new linkages between forests and other related issues emerge, new actors will be established, and new governance approaches will need to be developed. The next chapter will analyze the types of actors that operate within system of global forest governance with a view for providing a conceptual framework to managing the evolving complexity of the system of global forest governance.

Chapter 4

Actors in Global Forest Governance

Lead author: Patrick Verkooijen; Co-author: Hans Hoogeveen

4.1 Introduction

In the previous chapters, we have highlighted how forests, as a global policy issue, raise a host of compelling governance challenges because of the nature and complexity of the issues. Forest policy tends to be particularly complex. It is by no means unique in this complexity, but the multiple dimensions of complexity do require that special attention be paid to all the various facets of policy complexity. The sheer number, diversity, proliferation, and inter-connectedness of the actors involved in forest governance at its many levels is yet another key dimension of this complexity.

Global forest governance, by its very nature, includes a vast number of actors that vary widely in their type and specific interests and goals. From global institutions to local civic groups, from national governments to indigenous peoples, from large multinational businesses to smallholders dependent on forest products – forests are a key concern for a very wide range of actors, with a variety of interests and with very different, and sometimes contradictory, priorities. It is not only that there are many actors; it is also that there are many different types of actors (Najam, 1997). Institutions carry with them the additional complexity that they are made up of individuals who operate as agents for larger group interests but they also have their own motivations and interests (Susskind, 1994). The plethora of institutions result in particular governance challenges, as will be examined in chapter 5.

The aim of this chapter is to identify the major types of actors involved in the system of global forest governance and to discuss the roles they play in the system. The purpose of doing so is not simply to demonstrate the complexity in actor constellation in this process but also to highlight that this complexity – or, more precisely, the complications that arise because of this complexity – impacts the efficacy of global forest governance. Effective governance requires that the tools of diplomacy are used to address and accommodate the differing priorities and interests of different actors in a way that is consistent both with their own priorities and with global forest priorities (Young, 1994). The more actors there are and the more varied they are, the more complex this task becomes. Managing actor complexity – in terms of numbers and diversity - is certainly a challenge, but it can also be an opportunity because more actors also provide more opportunity for coalitions, cross-trade, and innovative approaches to the division of responsibilities and roles in a complex system (Najam, 1997). For example, as we will examine, the involvement of a greater number and variety of non-state actors has made forest diplomacy more daunting, but it has also raised the possibility of innovative approaches, including certain responsibilities in global governance being taken over by

non-state actors with comparative advantage, for example, in market-based mechanisms and in creating public awareness.

There is not a fix set of relevant actors in global forest governance challenges. The management of actors involved in forest governance is challenging because we are confronted with a 'supply chain of intermediaries,' ranging from the indigenous peoples and local communities who make the forest their home to the global institutions that establish international norms for forest management; to national governments who hold sovereign rights to territory; sub-national and local institutions that actually manage forests on a day-to-day basis; and to a multitude of producers of forest products who populate this governance supply chain at various levels. It is not simply that no single actor has the sole 'right' to make global forest policy, but it is also that none really has the ability to do so. However, such a polycentric perspective on global forest governance in which various actors can be seen in participating in various decision-making spaces does not necessarily imply that the impact of these actors on the system is equally divided amongst these actors.

In this chapter we examine the constituency of actors that make up global forest governance. In this, we analyze the full array of actors in the "forest system" and not only focus on those who impact forest governance on the multilateral level. We do so by looking at three types of actors, and we will utilize three conceptual tools to describe and explain who these actors are and how they operate within the global forest system. Just as Figure 2.2 illustrates that over the years we have had to complexify our understanding of the forests issue in order to come to grips with the actual complexity of the challenges, this chapter attempts to complexify our understanding of the actors involved in forests governance in order to better come to grips with the real complexity of the actors involved.

This chapter highlights the characteristics of various types of actors, points out nuanced distinctions within those types of actors and the ways those actors interact, and also provides examples of how these actors influence global forest governance. We do so by providing some illustrative examples of existing activities and initiatives that are already going on or are looming in the near future. The chapter is divided into sections examining the three broadest categories of actors – state actors, market actors, and civil society actors. Within each of these meta-categories we then provide a conceptual framework to help us arrive at a more nuanced sense of how actors in these sectors actually impact the state of the world's forests and their global governance. Our ultimate goal is to avoid falling into the same trap as previous eras of global forest governance by establishing an additional level of simplification of the forest issue. In lieu of another simplification, we attempt to understand the complexity, which might alert us to new innovations in global forest governance.

The chapter is organized around the notion that there are three essential types of policy actors: state actors, market actors and civil society actors. We discuss each of these in the following three sections. We begin by looking at various kinds of state actors involved in global forest governance. However, in the case of global governance there are also inter-state organizations. We discuss these as a special case of state actors, since

these organizations represent inter-state interests but have special dynamics of their own beyond state-centric dynamics. The discussion on market actors employs a framework that focuses on how different market actors relate to forest products and the type of benefits that they derive from these products. In particular we organize our discussion of market actors around how they influence forest policy and governance as users, consumers, producers and as investors. Civil society provides the third category of actors. These range from the smallest local NGO to large transnational CSOs that coordinate forest governance across the globe. Here we try to understand the role of civil society in global forest governance by looking at the different roles that civil society actors play at different stages of the policy process. The purpose of this analysis is not only to demonstrate the variety of actors involved in global forest governance, but to highlight the implications that arise because of this variety and how those complications impact the efficacy of global forest governance.

4.2 State Actors

Global debates on sustainable development – including on forests – have largely been characterized as a debate between rich and poor countries, along the North/South divide, or between countries of different types of forest cover (Najam, 2004). This dichotomous view has led to high tensions, difficult-to-bridge divisions, and a general inability to look at the forest issue as a whole (Najam, 2004). States, as our first actor, come in many different levels of development, geographical sizes, quantities of forest cover, forest-types, and abilities to manage forest use (Maini, 2003).

Previous chapters have made the point that there are many different reasons to be interested in forests. Indeed, different forest users have differing interests. Timber companies use forests for their vast wealth of valuable wood while the forest represents a home to many indigenous groups, and for those focusing on climate change forests are major reservoirs of carbon. Because of this, there is a need to begin thinking of forests, not around the binary divisions of poor versus rich or forested versus non-forested, but rather across various dimensions of their use and utility. One approach to do so is the 'four squares' framework developed by Jagmohan S. Maini (2003). Figure 4.1 places economic divisions and divisions along forest endowments as the two dimensions of the framework, pointing to the fact that different countries have different types of interests. The x-axis measures forest endowment while the y-axis measures per capita income. In four quadrants, the characteristics of countries are described that have a high per capita income with low forest cover, those with high income and high forest cover, those with low income and a high per capita of forest cover, and those with low income and a low per capita of forest cover.

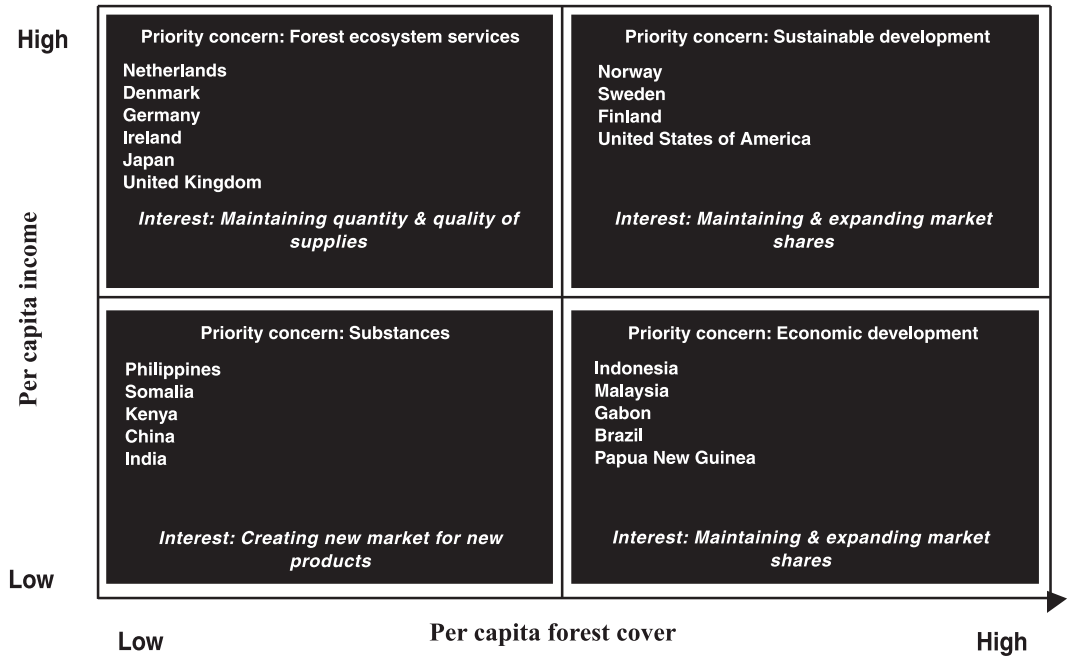


Figure 4.1 Four-realities: Mapping interests and forest concerns

Source: Maini, 2003; Hoogeveen et.al., 2008.

What this framework illustrates is that both per capita income and per capita forest cover form the basis of a country's overarching interests and policy concerns with respect to forests. Indeed, by plotting across other variables – for example, trade in forest products or forests at habitat – other groupings are also possible (Hoogeveen et.al, 2008). For the purpose of this study, an important notion, however, is that we need to look beyond simple North-South divisions and towards the actual use and utility that states derive from their forests to begin understanding what shapes their forest interests and why. Maini demonstrates not only that the world's countries do not divide among the obvious North-South or developing-developed lines, but also that low and high income countries with a similar amount of forest cover may have more similar interests than we originally thought (Hoogeveen et.al., 2008).

First used as an analytical tool, this framework helped Canada identify the likely forest agenda of various countries and identify where they converged and diverged (Jagmohan S. Maini, pers. comm.). For example, countries like Indonesia and Malaysia tend to view forests primarily as instruments for economic development. Developed countries with similarly high forest cover, such as Norway and the United States, have more resources to focus on the three dimensions of sustainable development, but share the interest of the developing countries in maintaining and expanding market shares. For those with a low forest cover, maintaining the forests that they do have is of utmost importance – for environmental and subsistence reasons. In that way, the Netherlands and the Philippines may share some policy interests, as do India and the United

Kingdom. At the same time, high income-low forest cover countries have more of an interest in maintaining their supply of imported forest products, while low income-low forest countries need to create new markets for forest products (Hoogeveen et.al., 2008).

Since political debates have largely centered on binary distinctions between the global North and the global South, or countries with tropical forests and countries with boreal and temperate forests, this approach articulates the need for a more nuanced approach that addresses the complex needs and multiple interests of states. The current approach to diplomacy - with it tendency to reduce the complexity of the governance challenge based on a narrow framing of the overarching interests and positions - does not seem to allow for this. As noted in chapter 3, the current discussions on REDD also have the tendency for reductionism in terms of managing the complexity. A comprehensive national REDD strategy could provide a step forwards in understanding and addressing state interests on a multidimensional level. However, the current debate in the climate change arena primarily focuses on REDD mitigation measures in the narrow sense: avoided deforestation.

Building upon the findings in chapter 3, figure 4.2 (below) demonstrates that among forest tropical countries, distinct forest endowments require different forest mitigation measures to contribute to the climate change mitigation potential of forests. A reductionist policy approach focusing on only one particular set of forest mitigation measures (i.e. avoided deforestation) excludes many forest nations of the world.

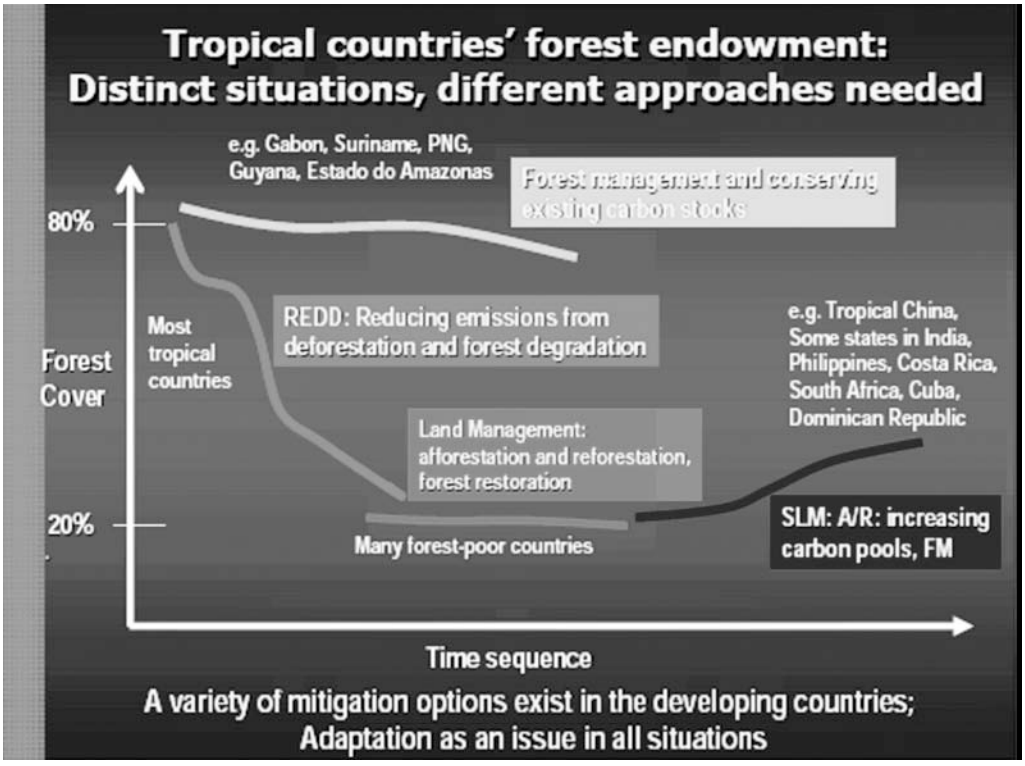


Figure 4.2 Tropical countries' forest endowments: Distinct situations, different approaches needed

Source: Blaser and Robledo, 2008

Forest mitigation measures in high forest cover countries with historical low deforestation (HFLD), such as Suriname or Gabon, focus primarily on conserving forests, while countries with high forest cover countries coupled with high deforestation (HFHD), such as Indonesia and Liberia, have high potential on avoided deforestation measures. Low forest cover countries with low deforestation have a high potential to benefit from afforestation and reforestation and a moderate chance of benefiting from forest restoration or rehabilitation efforts.

The ultimate implication of the reductionist approach in the current climate change negotiations with its focus on HFHD countries – by focusing on avoided deforestation while marginalizing other forest mitigation measures – is to leave out significant potential for increasing and protecting carbon reservoirs, as well as to exclude 90 percent of the rural population of the non-HFHD countries from any financial incentives to halt deforestation (Simula, 2008). However, states themselves have become so accustomed to reducing negotiations to unitary dimensions that dialogue among countries tend to become repetitive and inert as delegates repeat well-honed and well-rehearsed positions that have only marginal prospect of resulting in a governance outcome that effectively impacts the underlying causes of deforestation and degradation. With the ongoing desire among decision-makers for stability and simplicity in the system a significant challenge for global forest governance to become more effective is the structure of negotiations itself which does not give states the incentive to discuss issues except in narrow and well-defined contexts. The next section examines the challenge of policy coherence and intra-governmental coordination.

Policy Coherence and Intra-Governmental Coordination

As we examined in chapter 3, forests issues are multi-faceted and complex and spread out within the governance structures of countries resulting in significant policy coherence challenges within states. The need for intra-governmental coordination between multiple agencies as well as amongst multiple policy actors within countries (such as politicians and civil servants) is a non-trivial matter for all countries, developed and developing. For developing countries, however, this is further compounded by capacity questions as resources are stretched and other national priorities, such as health and education, compete with forest interests.

States are constellations of many institutions and even more individuals working in various policy-making areas. Each of these has interests of their own. Ultimately, state interests are themselves the sum of the interests expressed by these agencies. Any understanding of state action must comprehend both the fragmented nature of national governments, as well as the various levels of government policy, as severe challenges of domestic policy implementation. These challenges relate to the state's ability to collectively implement what the state, as a unitary actor, has agreed to do internationally. For achieving sustainable forest management, and for countries to comply with international commitments, those commitments must eventually be integrated into national development strategies (CPF 2008: 12).

However, recognizing the complexity of governments and the complexity of the issues,

a significant challenge for the system of global forest governance is the lack of coordination among the relevant ministries and departments engaged in forest management policy with others responsible for other sectors, such as climate change policy, food security or biodiversity. When they do, they tend to act as policy competitors. And to the extent that forest-related agencies do coordinate their actions, they tend to be removed in the national institutional hierarchies from the economic and security decision-makers. Likewise, local, regional, and national policy-makers do not naturally approach forest policy with identical interests and purposes (CPF, 2008). Given this lack of intra-governmental coordination it is difficult for the state to operate as a unitary actor interacting with other states in a comprehensive fashion (Hoogeveen, 2007).

Policies in the domestic realm can also conflict with the various international commitments that governments might be making in different international arenas. On issues related to sustainable development, including forest issues, this can create serious constraints on the actual policy space available to any particular domestic agency. A bilateral free trade agreement, for example, may bind tariffs and other trade policies on forest products in a way that does not permit the country to effectively implement global forest policy. On the international level, while the WTO "does not per se rule out demand-side measures, such as import controls, it does rule out such measures that are unilaterally imposed" (Humphreys, 2006: 166). Therefore, a country can support reducing illegally-harvested timber, but it cannot impose unilateral demand-side measures. These are the types of substantial policy constraints that domestic policymakers within states have to contend with.

Political commitment is crucial for successful implementation of commitments agreed within the system of global forest governnace. An important precondition for this commitment is the notion that politicians have to feel ownership of the outcomes of multilateral negotiations. Yet, very few politicians responsible for sustainable forest management issues at the domestic level ever get to participate deeply in the multilateral discussions on these subjects, which remain technocratic and bureaucratic at their core. In the current system of multilateral diplomacy, the role of politicians is diminished to ritually intervening by reading out pre-cooked statements. In fact, most professional diplomats themselves minimize the participation of domestic politicians and work hard to ensure that their ministers do not diverge from the script prepared beforehand. As a consequence, politicians lack a sufficient amount of ownership of the outcome. This can result in disengagement with the global governance of forests at the multilateral level, even when politicians may have great interest in addressing forest issues at the domestic level. Box 4.1 gives one example of the nature of this challenge based on personal involvement from the authors.

Box 4.1 Furious Politicians Leaving New York

The fifth session of UNFF, held in New York in May 2005, was mandated to find an agreement on the future international arrangement on forests. Towards the end of the first week of the conference there was a complete deadlock on most issues. As often happens at this point, key negotiators were unwilling to deviate from their original position, uncertain about the flexibility that other delegates might or might not have. In the following days, positions hardened even further and the space to create mutual gains seemed to be diminishing even as the clock ticking away rapidly.

On the Wednesday of the second week, the Ministers began arriving for the High-Level segment, where the main goal was to draft a Ministerial Declaration that would serve as input into the Heads of State UN Millennium Summit scheduled for a few months later. Eventually, nearly 60 Ministers attended. The Ministers were also invited to participate in two parallel High Level Round Tables where they could present their views in strictly ordered five-minute presentations. The scope of these sessions was rather generic and completely separated from the contentious issues that were being negotiated at the very same time by their own bureaucrats. While the Ministers delivered their prepared written statements, the key negotiators locked themselves up in one of the small rooms of the UN building to make a final effort to overcome the deadlock and negotiate a package deal. For many Ministers – and especially those who were most knowledgeable and interested on the specifics of the substance – being locked out of the real negotiations and the inability to give active guidance to the delegations that they were supposed to be leading became a major source of irritation.

Some countries requested that the Secretariat and the Chair, who came from Colombia and was a former Minister for the Environment, put the contentious issues on the agenda of the ministerial sessions. Yet, the secretariat resisted the idea and tried to focus only on a general Ministerial Declaration. This increased the frustration felt by the Ministers. A number of Ministers spoke openly of having been side-lined to only giving prepared-statements. The Chair and the Secretariat ignored these signals and insisted that the inter-Ministerial discussions should focus on the Ministerial declaration and not on contentious negotiation issues. The result was a growing disenchantment with the process by the Ministers, who – as a demonstration of their frustration – eventually decided that they were no longer willing to work on the Ministerial Declaration.

At the closure of UNFF 5, when the key negotiators were not able to work out a package deal on the future arrangement of forests, everybody left New York empty handed. In the closing plenary session many Ministers declared in unequivocal terms that they saw no need for them to come back to the Forum. As a consequence, the UN Millennium Summit outcome document only referred notionally to forests.

Source: personal information from the authors.

However, there are some signs that changes to the system are possible. An example of a more innovative approach is the organization of the high level segment of the seventeenth session of the Commission on Sustainable Development (CSD) in May 2009. In this case, the high level segment was organized in such a way that there was no room for the traditional ritual of general statements. Instead, parallel interactive roundtables were organized in which ministers were encouraged to engage interactively on certain themes leading to a 'shared vision' document endorsed by all Ministers (REF).

International Organizations

The influence of international organizations on global forest governance has greatly influenced since the early 1980s. Although the international system is primarily a system of states, it also operates through a web of international organizations through which state interests are represented and implemented (REF). A broad range of organizations play a central role in creating international cooperation and coordination among states on forest related issues, including intergovernmental organizations of the United Nations system and Bretton Woods institutions (Elliott, 1998: 106). Within the United Nations system a myriad of international organizations and institutions have a mandate to address global forest governance or a subset thereof. The UNFF, as discussed in chapter 2, has been tasked with the most comprehensive mandate to support the implementation of sustainable forest management. The most significant other organizations include the United Nations Food and Agriculture Organization (FAO), the World Bank, the Global Environment Facility, the United Nations Environment Programme (UNEP) and the International Tropical Timber Organization (ITTO). The UN Food and Agriculture Organization's (FAO) for example hosts the National Forest Programme Facility with a view to "active stakeholder participation and training, capacity building and awareness raising as well as [through] review of ongoing forest national policies" (CPF 2008: 44)

Within the Bretton Woods context, the World Bank, for example, has provided vast amounts of technical and financial assistance to countries in recent years in support of sustainable forest management (Hajjar and Innes, 2009). The World Bank's Program on Forests (PROFOR), as one example, helps to identify and develop conceptual tools for countries working toward sustainable forest management. More example the World Bank has embarked on the establishment of a broad range of new and emerging climate change related forest funds, such as the Forest Carbon Partnership Facilitaty (FCPF) and the Forest Investment Program (FIP).

However, IGOs also introduce their own global forest governance challenges of structural and mandate coherence. As institutions, they bring to the table their own secretariats, governance structures and programs adding to the complexity of the system of global forest governance:

➢ Overlapping and conflicting mandates. The broad range of international organizations active within the system of GFG often have overlapping mandates and sometimes conflicting mandates related to sustainable forest management. This lead often to work

programs which deals with the same issues, adding to the inefficacy of the system. The recent development of the Growing Forest Partnership (GFP), as hosted by the World Bank aims to link local and global initiatives and dialogues on forests and climate change. The GFP is a partnership between FAO, IIED, IUCN and the World Bank and is questioned by many observers as having only marginal added value to the existing NFP facility given its duplicating mandate to facilitate a dialogue at the national and subnational level.

➢ Competition and "turf wars". Secretariats tend to be in a structural fight for raising their own profile within the global system. Not seldom, this competition leads to turf wars, also for financial resources. The limited resources for international organizations to finance programs and projects for sustainable forest management has resulted in fierce competition among these organizations for voluntary contributions from donors (see box 4.3).

➢ Coordination and coherence. The plethora of international organizations in the system of GFG has lead to additional demands for coordination and coherence. The Collaborative Partnership on Forests (CPF), a voluntary partnership of 14 forest-related international organizations and institutions, has strong potential to provide this coordination function. Unfortunately, the existing practice demonstrates the severeness of the competition among these organizations significantly diminishing the impact of the CPF.

They often attempt to gain, as illustrated in box 4.2 below, new responsibilities and additional financial support. This can lead to interagency hostility, as is unfolding within the negotiations on a new REDD architecture, rather than constructive collaboration. These turf wars generate significant coordination challenges within the system of global forest governance (Hoogeveen, et al. 2008).

Box 4.2 Forest Finance and Competing claims

Several sources of international finance have been proposed to finance REDD efforts under a new climate change deal. This issue of how to design a new architecture on REDD created strong competition amongst several international organizations.

During the Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in December 2006 the government of Norway launched the International Climate and Forest Initiative providing up to 2.5 billion in new and additional resources on forest carbon mitigation measures.

Partially in response to Norway's initiative, the World Bank has spearheaded the development of REDD financing by the establishment of the Forest Carbon Partnership Facility (FCPF). The purpose of this program is to assist developing countries in their efforts to build capacities for REDD efforts.

As REDD is likely to become a huge undertaking with substantial financial resources - including those from Norway - FAO, UNDP and UNEP have developed, quickly after the launch of FCPF, the so-called UN-REDD programme. The mandate of UN-REDD is strongly overlapping the mandate of the World

Bank's FCPF resulting in fierce competition amongst these agencies to get adequate funding for their respective programs.

Source: Simula, 2008.

Against this backdrop of fierce interagency competition, an effort was made to manage the coordination challenges war by establishing the Collaborative Partnership on Forests (CPF) in 2000 by ECOSOC resolution 2000/35. The CPF supports the UN Forum on Forests (UNFF), which had also been established by ECOSOC. The coordination results of the CPF, as illustrated in the example above, are still mixed.

In the case of international organizations, there is also the role of secretariats as actors within the system of global forest governance. In the scholarly debate there are differing views on the ways secretariats should address competing interests among actors in global forest governance (Susskind, 1994). Is the secretariat merely the instrument of carrying out states wishes or is it a legitimate actor unto itself? Very often the answer depends on the specific individuals serving at the secretariats. Traditionally, secretariats have played relative passive roles. At the extreme, they have been unwilling to take the initiative, offering advice only when it is requested, keeping to a conservative interpretation of the mandate (Susskind, 1994: 58). Another, more adequate representation, describes secretariats as pro-active actors "floating" specific proposals during the different phases of negotiations intervening in the policy process (Susskind, 1994). Since the mandates of secretariats are relatively ambiguous and the guidance by States is limited often the interpretation of the mandate depends on the specific individuals serving at the secretariats. An example of the complications that can arise because of the muddled mandates is given in Box 4.3.

Box 4.3 A Parable - The Secretariat as Gatekeeper

Multilateral negotiations on the design of the international arrangements on forests have been conducted in the Intergovernmental Panel on Forests (IPF, 1995-97), the International Forum on Forests (IFF, 1997-99) and the United Nations Forum on Forests (UNFF, 2000-07). The negotiations are facilitated with the support of a Bureau, representing the five regional groups of the UN, and a supporting secretariat. During UNFF-7, the Netherlands was elected as chair of the negotiations.

In the run-up to the final session of UNFF-7 the Secretariat of the Forum was requested by the Bureau to draft a strategy paper on the issue of forest finance. In an informal encounter with the Chair, the Head of the UNFF Secretariat shared a personal note called 'My dream: A Global Forest Fund' that stated in unequivocal terms that a global forest fund should be adopted by UNFF7 and that the UNFF Secretariat should act as theTrustee. This idea was clearly controversial and had been fiercely debated by countries for nearly 15 years. It would, therefore, be seen as politically biased if introduced formally in the UN Secretary General's paper. Given that the mandate of the Secretariat is restricted

to assist the negotiations in a neutral manner, the Chair of UNFF did not approve the circulation of the document by the Secretariat. This was not an easy decision for the Chair, who was from the EU (as, in fact, was the head of the secretariat) which has generally been against the idea of a global forest fund, even though the Chair himself has been – and was at UNFF-7 a strong supporter of making 'new and additional resources' available for forest financing. Irrespective of the Chair's own views on the subject, the principle at stake was the role of the secretariat and the inappropriateness of the secretariat forcing a particular outcome on which there was no consensus. Equally important was the potential impact of introducing such a proposal on the larger negotiation process and the substantial risk of the entire process being derailed, including on those points on which there was real consensus.

Nevertheless, the head of the secretariat would not accept no for an answer and informally approached other member of the Bureau in order to gain support for his idea without informing the Chair. Upon learning of this unusual development, the Chair just explained to other Bureau members the reasons why he was against tabling the 'dream' of the head of the secretariat and the risks it could pose for the upcoming process of the negotiations. Two months before the start of the negotiations the Chair put the 'dream' document on the agenda of the Bureau which was rejected in the Bureau meeting.

The issue is not the content of the proposal per se, but an explicit attempt by the secretariat to push one particular outcome on a deeply contested issue. This incident demonstrates how an activist secretariat can undermine its own efficacy and the effectiveness of the system as a whole, even if the content of its proposal may have some support amongst some of the members.

Source: Personal information from the authors.

4.3 Market Actors

In current debates about the nature of sustainable development diplomacy, a growing number of scholars point to the emergence of private sources of authority and governance complementing state-centered policies of command-and control (Pattberg, 2005). As we will examine through the lens of instruments in the next chapter, the international forest policy arena has proven to be an innovative experimental field for new forms of governance beyond the state (Cashore, 2002). Within this setting, we are noticing a stronger involvement of non-state actors, such as those imminent to private forms of governance. Policy development and implementation in which governments are the main or sole actor are gradually complemented by approaches in which other networks of interconnected actors also play an important role. Business and NGOs, for example, have been the driving forces behind forest certification (Humphreys, 2006: 215).

While corporate interests in general have become a key aspect of global forest governance much of the attention at the global level has focused on the role of

multinational corporations (MNCs), without fully recognizing the various types, and range within those types, of actors involved (Elliott, 1998).

In figure 4.3, we suggest an alternative framework of how to understand the complexity of market actors. We suggest that there are four typologies in which actors can be making market use of forests – as actual direct users of forest products and services, as consumers of forest products and services where others are processing the products and services for these consumers, as producers of forest products and services, and as investors investing in forests or in forest products and services. An actor can, and many do, be more than one of these simultaneously. The purpose of this conceptual framework is to organize our understanding of market actors in a way that captures the complexity of uses of forests in a market context.

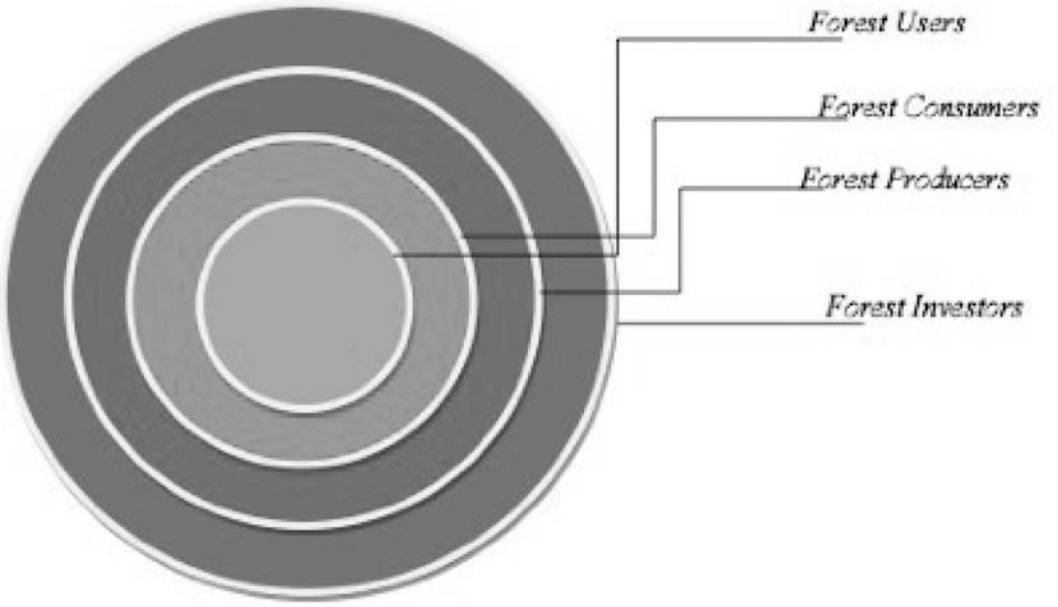


Figure 4.3 A Schemata of Market Actors

Forest "Users" Gaining Livelihoods

At the center of our framework reside forest users. Forest users, for our purposes include people who rely on forests for their livelihoods, such indigenous peoples and local communities. Very often they are direct users not only of the products in the forests, but of the forest itself – sometimes as habitat. These are people who are in direct touch with the forest, receiving a direct benefit and having a direct impact. According to the World Commission on Forests and Sustainable Development Report from 1999, "350 million of the world's poorest depend almost entirely for their subsistence and survival on forests" (Krishnaswamy and Hanson 1999: 14). Another billion of the world's population relies on "remnant woodlands, on homestead trees, and on agro-forestry systems" for fuel wood and food (Krishnaswamy and Hanson 1999). For that

reason, any solution to the forest issue must incorporate the interests and needs of forest users. Indigenous peoples make up a significant subgroup of forest users that have become more prominent in recent years. Of the 350 million people living within or adjacent to forests, 60 million are indigenous people living in the forest and depending on it to a high degree for their subsistence (Krishnaswamy and Hanson, 1999). Indigenous peoples use the forest for its many products, such as fruits and vegetables, roots and tubers, bush meat, spices, bark, and clothing materials. In addition to forest products, these groups have an aesthetic and spiritual relationship with forests, which, when combined with long-acquired traditional knowledge, promotes sustainable forest use better than many other market actors (Krishnaswamy and Hanson, 1999).

History shows that any global plans to save the world's forests devised without the full knowledge and agreement of indigenous peoples and local communities are doomed to failure and such top-down policy-making often serves to reinforce the unequal status quo in forest politics at the international, national and local levels (Griffiths, 2008). In this context, the development of a REDD scheme under a new global deal on climate change schemes with its strong focus on governments faces the risk of empowering governments at the expense of indigenous groups on the ground. In response to this, civil society and indigenous peoples' organizations point out that there are considerable risks that ill-conceived REDD interventions could harm communities and generate perverse outcomes, not least because the evolving global legal framework has so far failed to establish intergovernmental commitments on rights and equity issues as part of a new forest and climate regime. Most REDD finance proposals continue to flow from governments, international agencies, carbon finance companies and large conservation NGOs. Given the complexity and scale of the issues, most indigenous peoples and local communities are not well informed about REDD at the local level. A 2008 FPP-FERN review of nine R-PINs (readiness project idea notes) submitted to the World Bank's Forest Carbon Partnership Facility (FCPF) found that most had been developed with only minimal or no consultation with forest peoples (REF). In the case of Paraguay, Suriname and Indonesia, indigenous organizations have protested strongly that the government has so far developed REDD policies internally without consultation with indigenous peoples (REF 85). Indigenous peoples organizations also increasingly point to the 'moral hazard' in REDD financial schemes as currently proposed, which would target payments (compensation) and rewards towards 'polluters' (forest destroyers), while effective custodians, like indigenous peoples, who are already protecting forests, would go unrewarded or receive only token benefits (Griffiths, 2008). A possible consequence of the tendency of the global forest governance system to reduce complexity is to frame reducing emissions of deforestation and degradation as exclusively a carbon sequestration issue thereby excluding the interests and rights of those people who depend on the forests for their daily livelihoods most (TFD, 2008).

Despite the large numbers of indigenous people living in and around forests, a study in 2002 revealed that 77 percent of forest land was administered by the government rather than by the forest users themselves (Sunderlin, Hatcher, and Liddle 2008). While some countries have made a solid effort to turn the administration of forest land over to the indigenous people living on it, land tenure remains largely in public hands. Those

countries, such as Brazil and Mexico, who have turned over forest management to indigenous groups have benefitted from better management as a whole. In Mexico, in fact, community forestry has resulted in "greater transparency and less corruption, better forest use and protection, and improved livelihoods for local people" (World Bank 2008: 36). The justification for such action rests partly in the 'rights perspective' on ownership. These groups do not own the land on which they live, at least not in the traditional legal sense. Instead, they have moral and historic rights to its use that are often not reflected in the legal system. Under traditional theories of land ownership, the concept of the "tragedy of the commons" would come into play in these circumstances, leaving the forests poorly managed and carelessly exploited. However, moral and historic rights give the indigenous groups an interest in treating the forest as if they own it – resulting ultimately in lower deforestation rates (Kaimowitz 2007).

From an international law perspective, these base-level forest users need to be recognized as an important forest market actor due to international standards of human rights. These standards "recognize the right of forest peoples to own, control, use, and peacefully enjoy their lands, territories, and other resources and to be secure in their means of subsistence" (Colchester 2008:2). Property rights for the indigenous people groups involve also civil rights, political rights, economic rights, and social and cultural rights. Then for obvious reasons forest users have differing interests in and concerns about forests than producers and consumers of, and investors in, forest products and services. Thus, any solution for the forest issue, indeed any forest policy response to become effective, efficient and equitable, must consider the role of forest users.

Forest "Producers" Acquiring Commodities'

Another subcategory within market actors is those entities who produce products and services from forest resources. Forest "producers" then view forests largely as sources of certain commodities to produce and market lumber, fuel wood, and other important products. This group is also very diverse, incorporating both small-scale fuel wood gatherers who sell their wares at domestic markets and large timber conglomerates that sell timber across the globe. However, with a growing number of corporations commanding more resources than an average developing country, substantial powers are vested in fewer actors that are able to change accountability systems in their favor (Newell and Wheeler, 2006).

Globally, the formal forestry sector employs over 13 million people (FAO, 2004). In 2000, gross value-added in the forestry sector amounted to 354 billion USD (FAO 2004). Fuelwood and other wood-based products together make up approximately 2 percent of global GDP, valuing about 400 million USD annually (Schmincke, 2008). Although forest industries have been tagged as destructive, they provide a significant source of employment and income "especially in rural areas with limited alternatives" (Schminke, 2008).

The forest industry has also changed significantly in recent years in response to market forces, as well as public and state-based pressure to improve its environmental impact. Producers worldwide have begun to employ more environmentally friendly processes

and technologies. Additionally, they have begun to prioritize sustainable resource management by regulating harvesting and timber transport, as well as "implementing initiatives to produce raw material from other [resources] than natural forests" (Schminke, 2008).

Whether by extraction of forest commodities, influence over host countries, or the general technological trends of the industry, forest producers play a large role in global forest governance. However, producers do not have sole control over what they produce and how they produce it. Producers depend on the market, as defined by the demands of their customers, and in some cases, their investors, to shape their business interests. Importantly, for our purpose, different forest producers have different levels of voice in global forest governance. Large companies dealing in forest products often may have significant influence in the politries where they operate making them an influential actor in global forest governance. (Humphreys, 2006)

Forest "Consumers" Seeking Utility

For producers to survive there must also be consumers who purchase the products and services provided. Consumers make up the third type of market actor – the group that seeks utility from forest products and services. It is important to note that in many cases, consumers may also be producers and vice versa. Since none of the market actor-types are necessarily mutually exclusive, overlap among actors may make understanding the interests of market actors, and accommodating these interests in, forest governance further complicated.

Just like producers, consumers have the power to influence global forest governance through their market preferences and political pressure placed on their governments. Consumers in the United States, for example, consume more than a quarter of most forest products that the world produces, including industrial round wood, sawn wood, wood-based panels, pulp, and paper and paperboard (FAOSTAT). Developing country and emerging economy consumers play an increasing role in consumption patterns as well. Chinese consumers, for example, make up 23 percent of the wood-based panel market demand. China also accounts for 17 percent of paper and paperboard, eight percent of industrial round wood, and four percent of sawn wood consumption globally (FAOSTAT).

Within the context of an accelerating forest crisis and international deadlock on a global forest regime, new governance approaches to address accountability demands from Northern consumers have been co-evolved since the1980s. In this deadlock, non state rule-making systems that link consumers to traders and consumers and producers through a mechanism of certification appeared to be a possible solution to those attempting to overcome the stalemate at the intergovernmental level. Some commentators argue that the increasing demand for a private approach towards sustainable forestry can, at least partially, be attributed to broader economic and political trends in the last few decades that have given market-oriented policy instruments increasing salience (Cahore, 2002). The formation of the Forest Stewardship Council (FSC), as a novel cooperative mechanism to overcome an

accountability deficit in global forest governance, will be examined in the next chapter. For the purpose of this chapter, two considerations are important regarding consumer-driven schemes, such as the FSC.

First, there are now close to 50 different national, regional, and global standards competing with the FSC, making it very challenging for consumers without detailed knowledge to assess the actual value of the various certificates, a situation that in the long-run might well undermine the general idea of sustainability certification. This development of multiple schemes seems to underscore the broader trend of increasing complexity of the system of global forest governance. Secondly, current geographical patters of forest certification, strongly favoring enterprises in the developed world as we will examine in chapter 5, indicate a bias towards Northern producers thereby reinforcing and stabilizing asymmetric power relations (Chan and Pattberg, 2008).

However, despite these governance challenges, by bringing together many different actors and interests, by verifying these commitments, and by providing a model for other actors and other issue areas, the FSC, as one possible governance approach, provides an institutional response to the challenges of the system of global forest governance that merits further analysis.

Forest "Investors" Getting a Return

Investors make up the fourth and final type of market actor considered here, represented by the outer circle in Figure 4.3. Private investments in forests is driven, in part, by increased demand for forest products and, in part, by the need of corporations to secure new investment opportunities (Humphreys, 2006: 220).

Investors may be countries, organizations, corporations, or individuals. Direct investment in timber lands has been historically led by forestry industry corporations. However, institutional investors have taken a more direct interest in forest investments recently, providing indirect (or portfolio) investments through securitization, loan financing, and the outsourcing of forest land management (World Bank 2008b). As a result of the influx of institutional investors, timberland management organizations (TIMOs) have emerged, shaping the way that forests, as assets, are managed and governed (World Bank 2008b). In the U.S., timberland investments are "currently estimated at USD 30 to 50 billion" (World Bank 2008b: 23).

In addition to private, corporate investors, countries like Norway and Canada, both with high per capita incomes and high per capita forest cover, invest public funding into forests with the hope of maintaining and expanding market shares. Here, countries act not only as state actors, but also as investors in the forest system. But state investors do not only seek financial return. In the past, countries and country leaders have also put forth public funds for aesthetic purposes. For example, in 1961, Tanzania's President Julius K. Nyerere set aside 50 percent of the country to be natural reserve, establishing a network of national parks throughout the state. Similarly, President Teddy Roosevelt established the current system of national parks in the United States around the turn of the 20th century.

Following this development more recently, countries, as well as individuals and companies, seek environmental returns for their money, such as carbon credits, biodiversity, and watershed protection. Conservation International (CI) is one of many non-profit organizations that provide their own funds to support forest conservation efforts. Through a partnership with various state and non-state actors, CI invests in the world's biologically diverse and vulnerable areas to implement programs determined to be the highest priority for conserving the ecosystem (CEPF 2007). In 2007, CI's revenue stream came from a wide variety of sources, almost three-quarters of which were non-governmental (Conservation International 2007). By investing its own funds in forest governance, CI is able to play a role, not only as a civil society organization (to be discussed in the following section), but also as a legitimate investor who can demand an environmental return.

Private philanthropy contributes another subcategory within the domain of forest investors. Philanthropic efforts provide additional funds and publicity to preserve and sustainably manage forests for the purpose of gaining environmental returns. Approximately 6 percent of international philanthropic giving ($230 million) in the U.S. was allocated to the environment in 2005 (World Bank 2008b: 25). Though only a portion of that will go into sustainable forest management, as a funding source, it could increase as the stock market improves. In addition to providing additional financial resources for sustainable forest management, some of these non-traditional investors also influence the system of global forest governance through other avenues.

Box 4.4 The Prince's Rainforests Project

The Prince of Wales has long been concerned about climate change and the role of tropical rainforest loss. In 2007, following reports from the IPCC and Stern, he established The Prince's Rainforests Project (PRP) with the aim of encouraging global consensus as to how the rate of tropical deforestation might be slowed. Through a process of consultation, the project has developed a proposal for an Emergency Package for Tropical forests (PRP, 2009). The goal of the proposal is to generate substantial funding quickly through an innovative public-private partnership.

On April 1, 2009, the Prince of Wales convened a meeting of world leaders in London in which the findings of the report were presented. On this occasion they acknowledged the great importance of tropical forests in addressing climate change and providing broader benefits for the world, emphasized the urgency of greatly scaling up funding for this purpose. On that basis, world leaders decided to establish an informal working of interested countries to explore how to design a REDD scheme under UNFCCC: the International Working Group on International Finance (IWG). This informal working group, originating from the Prince's initiative, turned out to an influential actor in providing input to the ongoing climate change negotiations as it was recognized and supported in the G8 Summit declaration on forests and land degradation on July 8, 2009. At the UN

Secretary General's high level REDD+ event on the margins of the 64th General Assembly of the United Nations in New York City on September 23, 2009, several heads of state made favourable references to the IWG's efforts and analysis.

Just as the group of state actors is made up of diverse countries with divergent interests, motivations, and capacities, market actors are likewise complex and multi-faceted. Oversimplification of market actors may result to exclusion of some of these (sub)categories and their interests . A critical determinant for an effective system of global forest governance is the consideration of each of these market actors by addressing their needs and interests.

4.4 Civil Society Actors

The next set of actors we examine is civil society organizations (CSOs). Just like state and market actors, CSOs are far from homogenous. Since the Brundtland Report in 1987, civil society has grown in importance in the arena of global forest governance. There is also an increase in efforts to include civil society voices in international negotiation and global governance fora, although as Box 4.5 points out this has not always been an easy process.

Box 4.5 Limited Participation of CSOs in Forest Negotiations

Intergovernmental processes, such as the United Nations Forum on Forests (UNFF), are primarily state-centric negotiations. However, it has now become standard process to also try to include the voices from civil society, organized around what are 'Major Groups', including Civil Society Organizations (CSOs). The UN has developed a set of rules about the position of NGOs during intergovernmental meetings and negotiations. In the UNFF context, for example, Major Groups involvement is rather restricted. Traditionally Major Groups have been invited to participate in roundtable dialogues en marge of the UNFF negotiations. Furthermore, Major Groups are allowed to make general statements in plenary sessions to respond and add their voice to government interventions.

Since 1992 NGOs have played an active an important role during the process of IPF, IFF, and UNFF. Especially in the high days of the negotiations, in 1997 and again in 2005, NGO's took clear positions and not only lobbied in New York, but also in government

During the seventh session of UNFF in 2007, two roundtable sessions were organized with a view to inform national governments about the key interests and concerns of Major Groups. Both roundtable sessions were restricted to an hour and a half and held at the margins of the meeting. Although the meetings were scheduled as a formal part of the agenda, government representation in the roundtables was very limited. In the second roundtable session which took place at the opening of the final week of negotiations there were just a handful of junior

government representatives present. In the empty conference room of the UN the small number of Major Groups spoke mostly amongst themselves, while in the corridors of the UN building negotiators were consulting on how to broker a deal. Partly as a result of this, Major Groups questioned the relevance of their presence in New York and discredited the Forum as another 'talk shop' where their participation was more symbolic than anything else.

Source: personal information from the authors.

CSOs, or non-governmental, non-business stakeholders, are commonly viewed as 'activist' organizations. Indeed, many are, but CSOs are as widely diverse as are states, institutions, corporations, and individuals. Broadly speaking, CSOs may be better conceptualized as "policy entrepreneurs" who influence public policy (Najam, 1997). However, even that denotation is a simplification. How do they influence policy? And at what level?

There is a great desire, even among CSOs themselves, to seek a common voice – in part in order to present a united front to the state actors they aim to influence. However, it is not clear whether this is either feasible or desirable. A major purpose of civil society involvement is to enable a diversity of viewpoints, experiences, and ideas to enter into the policy discourse (REF). Thus, dialogue surrounding global forest governance will be richer and more representative if both small local CSOs and larger Western-based institutions are involved.

Generally speaking, the CSO sector tends to serve four key functions: policy advocacy, policy monitoring, policy innovation, and service provision. The policy process, meanwhile, usually consists of three essential steps: agenda setting, policy development, and policy implementation (CSO paper). Table 4.1 provides a conceptual framework to help us understand better the role of CSOs in global forest governance. Importantly, this framework divides CSOs in a somewhat different way from the way state or market actors were previously discussed. Rather than pointing out North-South distinctions, or divisions between local, regional, and international organizations, this section emphasizes the different functions that CSOs can serve to affect forest governance globally.

	CSOs as Advocates	CSOs as Monitors	CSOs as Innovators	CSOs as Service Providers
Agenda Setting Stage	-Conservation International's Centers for Biodiversity Conservation	-CI: Pressure-State-Response (PSR) monitoring system	-RRI Supporting Networks Programs	-Environmental Investigation Agency -CI's CBCs -RRI's Analytical Studies
Policy Development Stage	-FERN -Global Witness and Rainforest Council -Conservation International	-Earth Negotiations Bulletin -CSO pressure on World Bank forest policy -Pakistan National Conservation Strategy	-CI's Kayapo Project in Brazil -Terrestrial Carbon Group	-CI Brazil -CI's Kayapo Project -CBC Philippines
Policy Implementation Stage	-Rights and Resources Initiative (RRI) -Green Belt Movement in Kenya (Najam 1999) -FERN & Global Witness and Rainforest Council	-CI's Doungma Project in Tibet -IMAZON (Brazil)	-CI's Conservation Agreements -CI's Innovative Financing -Fanamby (Madagascar) -Forest Stewardship Council -CI's Doungma Project in Tibet -IMAZON (Brazil)	-CI Centers for Biodiversity Conservation -CI Chinese Collaboration - ChoCO2 (Chocó-Manabí Corridor Reforestation Conservation Carbon Project) -Gordon&Betty Moore Foundation: Andes-Amazon Initiative -Oreades (Brazil)

Table 4.1 Exemplars of CSOs in various roles, at various levels of discourse

CSOs as Advocates

The first column in Table 4.1 provides various examples of CSOs playing the role of advocate in the policy sphere. As advocates, CSOs act on behalf of diverse citizen interests, providing the mouthpiece for their concerns (Najam 1999). Advocacy occurs at all different levels of the policy process. At the agenda-setting stage, advocates frame the issues, establishing a common language and sometimes, a common world view (Najam 1999). CI's Centers for Biodiversity Conservation (CBC) provide a clear example of such agenda setting in the forest context. The Centers focus through a wide lens on whole regions framing the primary biodiversity issues, taking into account socio-economic, political, and environmental issues. In so doing, the Centers "speak authoritatively [to development agencies and policymakers] about the links between healthy ecosystems and healthy humans, helping leaders grasp the importance of the essential [environmental] services" they propose (Seligmann, et al. 2007: 6-7).

Advocates can go a step further in the policy development stage by influencing the final shape of state and intergovernmental policies. In one instance, the Forests and European Union Resource Network (FERN), together with the Global Witness and Rainforest Foundation, published a position paper, placing pressure on the EU to help shape its policy on deforestation and climate change. It urged the EU to not rely on market mechanisms to fund their climate policy, but rather to address "the drivers of deforestation and recogni[ze] local peoples' rights" (FERN 2008). It directed the EU with several "should" statements, encouraging policy makers to redefine the term "forest," look at the potential positive contributions of shifting cultivators, and keep logging companies from benefitting from the REDD scheme, among others.

At the policy implementation stage, advocacy usually takes the form of protesting against a specific policy implementation, while mentioning some preferred alternatives.

The Rights and Resources Initiative (RRI) provides an example of this sort of advocacy by "convening dialogues [between policy makers, civil society, and communities] to generate . . . improved implementation of existing policies" (RRI). The effort by FERN and others to shape EU policy also acted to publicly criticize existing policies such as the Emissions Trading Scheme (ETS) and the CDM. The organizations point out that ETS has only succeeded in providing funds to the carbon markets and has not made much (if any) progress in reducing emissions of greenhouse gases. Furthermore, the paper indicates that the CDM has a "giant loophole," delivering projects "that have contributed little, if anything to sustainable development" (FERN 2008). On a local level, the Green Belt Movement in Kenya advocated for a national tree planting program, which resulted in 10 million newly planted trees, involved 50,000 Kenyan women, and managed to define Kenya's national tree planting policy.

CSOs as Monitors

The second prominent role for CSOs is that of policy monitors. In this role, civil society keeps tabs on the policy agenda, policy formation, and policy implementation. The monitor role also takes place at all three stages of the policy process and takes on different characteristics at each stage.

When setting the agenda, monitors generally collect and publish information to shape the emerging policy agenda. Conceptually speaking, monitoring at this level is a "precursor to advocacy," as it involves more "identification of problems rather than solutions" (Najam, 1999). At the policy development stage, monitors also collect and publish information, but this time about the policy development discussions as they take place. The Earth Negotiations Bulletin (ENB), an arm of the International Institute for Sustainable Development (IISD), for example, plays a role in environmental policy development by tracking "the evolving shape of extremely complex, time consuming, distant, and protracted policy developments on a regular and immediate basis" (Najam 1999). The deep influence of civil society can be seen in the shifts in World Bank forest strategy over the years (see also chapter 3 on this). As a result of CSO pressure, and careful monitoring, the World Bank underwent a two-year review process of its lending policies, involving CSOs as well as governments and other stakeholders (Hajjar and Innes, 2009). The result was a new 2002 Strategy that aimed at "harness[ing] the potential of forests to reduce poverty, integrat[ing] forests in sustainable economic development, and protect[ing] vital and global environmental services and values" (Hajjar and Innes, 2009). Many U.S.-based non-governmental organizations play a similar domestic role by placing an office in Washington that tracks the relevant policy debates. In the general arena of environmental conservation, the Pakistan National Conservation Strategy represented a Southern example of public monitoring of Pakistani environmental policy development (Najam, 1999).

Monitors at the stage of policy implementation take notice of the actual implementation of certain forest policies, documenting and publishing violations of international and national standards and laws (Najam, 1999).

CSOs as Innovators

The third column in Table 4.1 provides examples of CSOs in the role of policy innovator. An innovator's principal goal is to come up with new ideas, create new approaches, and implement new strategies in the policy process. CSOs that innovate at the agenda setting stage play a "seeding role" in which they demonstrat[e] the efficacy of a new idea, publiciz[e] it, perhaps persuad[e] those with access to the greater power and budgets to take notice, and then encourag[e] the widespread adoption of the idea" (Najam 1999). For example, the Environmental Defense Fund (EDF) put on an international workshop on reducing emissions from deforestation and forest degradation (REDD). The purpose of the workshop was to influence and inform policy-makers and the public on the potential REDD contribution to future international climate agreements. RRI also plays a significant role as an innovator by supporting networks of policy makers and other significant actors to exchange ideas and foster international dialogue (RRI).

At the policy development stage, innovators create new approaches for addressing the forest issue, and those novel approaches are eventually accepted as "policies of choice" (Najam 1999). Innovation at the stage of policy implementation generally involves the most concrete work by CSOs. These include actual technological or other innovations that can be (and have been) demonstrated from on-the-ground evidence as being effective. One unique approach to such innovation was undertaken by the Forest Stewardship Council (FSC), which laid down an "international set of Principles and Criteria . . . defin[ing] FSC's threshold for responsible forestry practices worldwide" (FSC-US n.d: 5) By setting up a forest certification process, FSC directly encourages responsible forest resource practices by leveraging market interests.

CSOs as Service Providers

Providing services is probably the single most well-recognized role for civil society actors in any arena. In forests, as elsewhere, CSOs have been engaged in service provision at all levels of the policy process. This includes providing scientific resources and reports that shape policy agendas, supporting the international policy development process, and directly serving the public by helping to implement new policies on the ground.

At the agenda setting stage, CSOs can provide services such as scientific research and technical assistance to developing countries in preparing national reports on environmental impact (VB). The Environmental Investigation Agency (EIA), for example, gathers film, photos, and other information from all over the world by way of individual investigators. They then provide the information to governments constructing their environmental agendas. According to EIA, its "timely exposés have been extremely effective catalysts for change," placing illegal logging at the "top of the political agenda in Indonesia" and encouraging the EU to produce "an Action Plan to deal with the trade in illegal timber" (EIA). RRI likewise produces analytical studies on natural resources as a part of its program to help shape policy-maker decisions.

Service provision for policy implementation generally involves "citizen initiatives which

serve to fill a major void in what might otherwise be considered an area of state responsibility" (Najam 1999).

This framework conveys multiple ideas. Civil society has been very active in the realm of global forest governance, as well as in related areas of conservation and biodiversity. Furthermore, civil society actors have a lot to offer at all levels of the policy process. Whether they undertake research to provide data for countries trying to set their forest governance agenda or help forest dwellers to learn how to sustainably extract resources, CSOs have an important role to play in global forest governance. Unfortunately, CSOs and other civil society actors attempt to fulfill multiple roles at various levels of the policy process, creating more policy "noise" than actual progress. For effective use of each of these roles and to efficiently intervene in setting agendas and developing and implementing policy, CSOs ought to be matched with role that best fits their structure and capacity.

To the extent that CSOs limit their demands to a stronger role in multilateral negotiations, they simplify and restrict the potential scope of their impact. Just like considering only the interests of only one set of state actors or only a few market actors, CSOs seeking to fill only a few roles in the policy-making process lead ultimately to the exclusion of important inputs, thus yielding suboptimum results. Instead, CSOs must engage the system at all levels and in multiple ways in order to successfully construct an effective system of global forest governance.

Other CSO Players: Knowledge Community

Science plays an important role in sustainable development governance both because our knowledge of sustainable development processes remains incomplete and also because the science itself is rapidly evolving. Sustainable development policy, therefore, needs to be knowledge driven. This has been particularly true in the case of climate change, but it is also true in other areas, including on forests. The importance of expert advice in shaping policy decisions is nothing new. In this, the ability to interpret reality allows experts to wield real power. Because of their access to specialized knowledge, scientists are uniquely situated to place certain issues on the public agenda (Litfin, 1994). Science and the science community have become increasingly important to global forest governance in several ways. First, science and scientists have helped to mobilize debate and action by governments on forest issues. Second, on many forest issues scientific expertise is necessary to assist policy-makers in the development of a policy response. And, third, once in place, the assessment of forest standards and targets is usually to proceed on the basis of best available scientific information. Finally, scientific research and scientists themselves have a potential role in encouraging compliance with international agreements (Elliott, 1998: 121).

However, science and the scientific community have become politicized in several ways. Haas has pointed to the importance of scientists as epistemic communities – 'transnational networks of knowledge based communities that are both politically empowered through their claims to exercise authoritative knowledge and motivated by shared causal and principled beliefs' (1990, p.349). Epistemic communities are defined

in terms of shared knowledge as well as a common political perspective. Implicit in the epistemic community approach is a traditional faith that science can transcend politics, that knowledge is separate from power. Although an extended discursus on the sociology of science goes beyond the scope of this thesis, it is argued that the notion of knowledge brokers refines the concept of epistemic communities, which neglects the extent to which knowledge, once produced, becomes something of a collective good available to all who employ it skillfully (Jasanoff, 1990). Implicit in the term is the recognition that injecting science into policy is itself a political act requiring a strategy of information transfer. Nongovernmental actors, such as those discussed in the previous sections, can also function as knowledge brokers, framing and translating information not only for decision makers but also for the media and the public. Thus, while scientific knowledge is an important source of power, scientists are not the only ones with access to it; once produced, knowledge becomes something of a collective good, available to all who want to incorporate it into their discursive strategies (Litfin, 1994: 37). In this, science can assist in political decision-making, but it cannot be a substitute for it. Recognition of this reality underscores the importance of risk analysis and of 'countervailing powers' in risk analysis, enabling the divergent assessments of risks by the various social actors to play their full weight. Comparative risk analysis can be useful as a way of objectifying opinions and avoiding ad hoc policy reactions. While risk analysis can assist the political decision-making process by providing credible information, it can never take the place of that process (Organization of Public Administration, 1975; Rabbinge et al, 1995).

The force of scientific arguments has also reemerged through integrated assessments like the Millennium Ecosystem Assessment. Still, without authoritative science— including relevant expertise from both developed and developing countries— and clear avenues for knowledge to influence policy processes, the role of science within the system of global forest governance is likely to be marginalized (Najam, 2006). At the same time, the demand on science, particularly within the overarching political landscape on REDD measures, is increasing. Implementing REDD, as one element of the system of global forest governance, requires, amongst others, increased capacity for monitoring, reporting and verification (MRV). In particular, there will be a need for enhanced capabilities in both current and evolving technologies in remote sensing to access and process the data for national needs, and in methods for measuring and estimating forest carbon stocks (Meredian Institute, 2009: p.19).

The knowledge community – including traditional knowledge which is especially relevant to forest policy – has to be a key actor in developing an effective system of global forest governance, which is why it is important to find appropriate mechanisms in which credible knowledge can be produced and can inform policy processes.

4.5 Concluding Thoughts

As has been demonstrated in scholarly work revolving complexity theory, actors within the system of global forest governance do not appreciate complexity and non-linearity. Complexity is regarded as a source of failure and as something that should be reduced or ‘fixed’ (Teisman, 2008: 2). However, actors connect which each other in myriad ways

around multiple components of the evolving global forest governance agenda.

This in itself supports the claim for a polycentric perspective of global forest governance which seems a more adequate representation of the complex reality. However, there has been some headway in trying to involve non-state actors at the multilateral level, but these have often been piecemeal attempts and token gestures. There is an urgent need to rethink the question of actors and participation. It is clear that more actors need to be incorporated in more meaningful ways. Despite the polycentric approach of the system of global forest governance developed in this chapter, it is also clear that states will remain the dominant actor within the system. However, non-state actors – including market actors as well as civil society actors – have to be incorporated into global forest governance in more meaningful ways to promote a more effective system by making use of the specific skills of the different actors thereby utilizing its complexity.

The initial attempts to bring in multiple actors and actor-types have met with mixed results. As noted above, the Collaborative Partnership on Forests (CPF) has run into internal obstacles to cooperation that has limited its effectiveness in the past. However, CPF's members include intergovernmental organizations like the UNFCCC, FAO, and the World Bank, as well as civil society networks like IUCN and IUFRO, and its goal remains to "support the implementation of internationally agreed actions and sustainable forest management, for the benefit of people and the environment" (CPF 2008: 5). The CPF may not have met its potential yet, but the potential is clearly there. The questions remain, how do best to realize this potential? The answer will have to include a careful rethinking of the structures of actor participation and the incentives for cooperation. It will also require a careful rethinking on how to get different types of actors – state, market and civil society – working together.

There are some successful governance approaches to start building upon. We are seeing a transformation of global forest governance to involving a growing number of non-state actors in voluntary schemes and other coordinated efforts to address problems of global change (Pattberg, 2007). The Congo Basin Forest Partnership (CBFP) began as a "non-binding and voluntary agreement between governments, the private sector, civil society and development organizations with the objective to promote the conservation and sustainable management of the Congo Basin's forest ecosystems" (CBFP 2008). The CBFP contains private sector members such as the Society of American Foresters and the American Forest and Paper Association. Civil society members include the African Wildlife Foundation, as well as IUCN and World Resources Institute. CBFP also incorporates input from individual African state actors and intergovernmental organizations like the ITTO and UNEP. Similarly, the World Business Council for Sustainable Development (WBCSD) has coordinated efforts between the private sector, IGOs, states, and civil society to provide "a platform for companies to explore sustainable development, share knowledge, experiences and best practices, and to advocate business positions on these issues in a variety of forums, working with governments, non-governmental and intergovernmental organizations" (WBCSD). An implicit limitation, however, in both the CBFP and WBCSD is that they are rarely able

to incorporate some of the more marginalized actors; such as ground-level forest users and less organized groups.

A more successful instance of multi-actor coordination on diverse levels can be found in the efforts of The Forests Dialogue (TFD). The TFD represents the multi-stakeholder collaborative approach necessary to take inputs from all interested voices to develop global forest governance. An important contribution of the TFD was the adoption of its CEO Forum on the role of forests in climate change which mapped out a consensus action plan on concrete next steps as was adopted by the CPF in its strategic framework (TFD, 2008). But in order for TFD to succeed, it must, in fact, achieve its goal to provide more robust linkages with the formal multilateral negotiations as well.

Ultimately, the actors challenge in global forest governance is to both broaden the base of actors involved and to deepen the type of participation and voice that is afforded to different actors. This may make the system of global forest governance more complex but it is likely to make the results of the process more representative and, therefore, more likely to be effective.

Chapter 5

Policy Instrumentation

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5.1 Introduction

The multiplicity of issues, users, uses and views of forests has led to myriad governance mechanisms and diverse approaches to the implementation and enforcement of sustainable forest management. While states once played the dominant role in global governance, as issues have multiplied and the interconnections among them have grown more complex, other actors, including intergovernmental organizations, private sector, scientific community, civil society organizations, and consumers, have also become significant actors in designing and implementing the system of global forest governance.

The proliferation of international instruments, especially treaties or conventions, which, particularly where global forest governance is concerned, have complicated the issue and made effective governance more difficult at all levels. For example, forests are addressed in different treaties or conventions and different international organizations in connection with various other issues, including climate, trade, biodiversity and agriculture. A variety of international actors implements, monitors, and enforces these agreements through different means and with a lack of coordination capacity and mechanisms, resulting in a suboptimal system of global forest governance.

In chapter 2, we described how the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 was preceded and followed by a flurry of negotiations for legally binding instruments, including the Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the Convention to Combat Desertification (UNCCD). However, attempts to negotiate a legally binding instrument for sustainable forest management at UNCED itself, or since, have not been successful. Instead, global forest policy is caught in what has been called a "logjam" (Humphreys, 2006), as recent global discussions on an international instrument on sustainable forest management, including on forest financing, and on policy implementation remain hampered in slow-moving intergovernmental discussions within UN forums.

However, as examined in chapter 2, the trends we are seeing in global forest governance are directly related to the larger trends within sustainable development governance in general. The proliferation of MEAs, and the resulting fragmentation of international environmental institutions is often described as one of the key challenges of sustainable development governance (SDG). Sustainable development governance, as we have analyzed in chapter 2, has been plagued by a proliferation of treaties, duplications of mandates, dispersion of secretariats, a phenomenal rise in the negotiation burden on countries – especially developing countries – leading to negotiation fatigue, inefficiencies

in resource mobilization as well as resource utilization, and a resulting sense of a governance system in disarray. That we have been able to create a global system of sustainable development governance in as short a period as we have is impressive. However, the system shows all the signs of being put together in a hurry and remains far from optimal. Its potential is clear, but remains largely untapped (Najam et.al., 2006).

Scholars as well as policy practitioners have become increasingly concerned about the 'messiness' of the global sustainable development governance system (often called the 'global environmental governance' (GEG) system, which is itself a problem since it focuses on only one of the three pillars of sustainable development). Amongst the issues of concern identified in this literature, and as we highlighted in chapter 2, the following are of special relevance to the system of global forest governance:

➢ **Scale of Governance / Subsidiarity:** Political decisions are being negotiated in new modes of governance which departs from convention, hierarchical legislation using regulations and directives (Eberlein&Kewer, 2002; Buecher, 2008). At the same time, within the current UN system often the leading system is that society can be governed from UN Headquarters in New York.. The actors in the global forest governance system as described in chapter 4 gather information, exchange ideas, formulate proposals, and meet in informal and informal settings, prepare documents, and vote whether or not to accept new responsibilities, including taxing themselves to cover the costs of monitoring their management efforts (Susskind, 1994). However, at the global level these actors formally meet within the UN system and given its intergovernmental character only governments are involved in the final decision-making. This leads to the strong notion of diplomats that they can rule, manage or make society from New York, Rome or Nairobi. It is not without reason that these diplomats press for treaties or conventions as the main instrument, because they feel that such instruments have the power to directly influence the behavior at the national or subnational level. This in itself has become one of the major stumbling blocks for achieving sustainable forest management worldwide. Such an approach does not give full justice to the changing national and international society where other non-state actors have gotten crucial roles and responsibilities for achieving global objectives (Hoogeveen et. al., 1991). Furthermore, such an approach is not adequately equipped to the complexity of the problem, which demands weighing different interests involved and rationalities (political, economic, scientific and economic) with which governance is confronted (Snellen, 1987). Many decisions stemming from UN diplomacy have therefore the risk of becoming a dead letter without little or no impact at the national level. Given the complexity of sustainable forest management a general premise is that not everything can or should be governed at a global level. As such subsidiarity should be the leading principle in the decision-making processes in New York. Subsidiarity, the principle which says that action should be taken at the lowest possible level of governance, is a potentially powerful concept around which a debate about the optimal assignment of tasks across different administrative or governance levels could be constructed (Jordan, 2000). The essential idea, being that that processes should be managed at the level closest to where the problems in forest governance happen, means that we have to differentiate between which issues are managed at the global level (such as global goals and targets) and which matters should be managed at

the national or local level. Some things are best and should be managed in ("New York"), i.e. at the global level with participation from everyone and with regular broad diplomacy, while others are best managed at other international fora, the regional level, or at more technical or national levels. The level where issues are managed should correspond to the nature of the issues and the nature required addressing them. In this way institutional decentralization is a second element of an effective system of global forest governance which we further elaborate in the concluding chapter. Differentiation is needed between the "broad and general" diplomacy that happens in New York and the more specific diplomacy that is needed and possible at subsidiary international forums. In the case of forests, very often a regional approach is much more appropriate.

➢ **Treaty congestion** is a prominent problem afflicting SDG (Weis 1999, Najam 2003). Within this broader field there are more than 500 MEAs registered with the UN, including 61 atmosphere-related; 155 biodiversity-related; 179 related to chemicals, hazardous substances and waste; 46 land conventions; and 196 conventions that are broadly related to issues dealing with water (Knigge et al.; Roch en Perrez, 2005). This has created messiness, incoherence and confusion in SDG, and incites demands for centralization in decision-making. There has also been a tendency to assume that the autonomy of legal agreements implies autonomy of secretariats. This has led to an institutional congestion that complicates as well as exacerbates the MEA proliferation. As a result, MEA secretariats instead of seeking collaboration and coordination, have developed an institutional interest in further expansion of their work, competing with other secretariats. Adding further to the noise is the proliferation of new subsidiary bodies and ad hoc working groups within MEAs (French, 2002). The net result of all these developments is a cluttered and overheated MEA negotiating calendar which not only produces negotiation fatigue but can also distract discussions from actual treaty implementation. It may lead to a tremendous growth of budgets of MEAs for partly overlapping activities. An analysis of ten leading MEAs highlights a budget increase from 8.18 million USD in 1992 to 75.83 million USD in 2007. This is more than a 900% increase (Munoz et.al., 2009).

➢ **Institutional and policy fragmentation**, has resulted from policy being dispersed not only amongst ever more specialized treaty bodies but also geographically across the globe as the institutions managing these policies get fragmented by having to operate in different political, normative and geographical contexts (Le Prestre and Martimot-Asso,2004; Knigge et al, 2005). For example, the Climate and Desertification Secretariats are in Bonn, the Biodiversity Secretariat is in Montreal, the Convention on International Trade in Endangered Species (CITES) in Geneva, etc. This fragmentation also has significant consequences for implementation at the national level, not only because global policy signals reach national governments from different global institutions, but also because the responsibility for feeding in national positions into these global policy processes become fragmented nationally. For example, while it is widely recognized that there is a complex system of interrelated cause and-effect chains among climate, biodiversity, desertification, water and forests, each responding convention or instrument has its own defined objectives and commitments that fragment institutional commitments, create issue barriers, and impede the search for policy coherence.

➢ **Negotiation fatigue** is increasing and states, especially developing countries, struggle to meet institutional demands as the number of institutions and international agreements increases. Participation in SDG represents a challenge for all states, but the

challenges are particularly severe for developing countries, which use very scarce resources to participate in negotiations and meetings, and to satisfy reporting requirements and other SDG demands (Chasek and Ramajani). A general sense of negotiation fatigue is now apparent amongst seasoned sustainable development negotiators from all countries. Reasons behind are missing unifying concepts, unifying methodology, variable sense of urgency, lack of political support, lack application of financial instruments and lack of leadership. The implications and consequences of negotiation fatigue can be particularly costly for developing countries.

Overstretched human and financial resources needed for global governance leave developing countries with fewer resources for implementation or to mitigate environmental threats of most concern to them. A recent study highlighted that between 1992-2007 on 10 major MEAs held 250 negotiation meetings lasting 1,626 days (Munoz, Thrasher and Najam, 2009). The study demonstrates that there is excessive negotiation activity, although it is not clear whether and how much of this translates into actual outcome improvements. Despite, and possibly because of, all this negotiating activity, measuring the effectiveness of the SDG system has become conceptually and practically important (Young, 1999).

➢ **Duplication and conflicting agendas** occur because new treaties often tend to be negotiated from scratch by new negotiators who do not have the tools to retrieve institutional histories and have little incentive to build upon existing agreements. Moreover, because MEAs are often time- and energy-consuming multilateral negotiations (Susskind, 1994), agreement sometimes comes at the cost of leaving treaty text purposely ambiguous and unclear. For example, technically both CITES and the Convention on Biodiversity (CBD) have a conservation focus. However, in practice, they put very different emphasis on preservation and sustainability. Finally, the same issue can be differently governed in different policy arenas. For example, such conflict is most evident in the potential conflicts between trade and environmental law.

Building on the above, the remainder of this chapter will look at the available suite of policy instruments for global forest governance, and the constraints and opportunities for better implementation of global forest policy.

5.2 Policy Instruments for Global Forest Governance: The Context

As discussed in previous chapters we are witnessing an increase in the internationalization and, to a certain extent, globalization of forests, in terms of production and consumption, as well as policy. In the years since UNCED – working through the Intergovernmental Panel on Forests (IPF)/Intergovernmental Forum on Forests (IFF)/ United Nations Forum on Forests (UNFF) – the international community has made some progress in the development and coordination of international forest policy, but not enough to make sustainable forest management a reality on the ground (FAO, 2009). In particular, negotiators have struggled to get clarity and consensus on three critical and related issues: (a) what should be the global objectives and the rationale for action at the global level; (b) what is the best legal character for an international forest instrument, and (c) what are the most effective means of implementation, especially including the sources of new and additional financial

resources (Hoogeveen et.al., 2008).

While there is wide agreement that global forest governance needs to be contextualized within the framework of sustainable development, this has itself made the efforts all the more difficult. Clearly all three pillars of sustainable development – economic, environmental, social – are of immense relevance to forest policy (World Bank, 2004). Yet, each of these pillars operates within its own unique policy 'rationality' (see Craig, 1990: 302). For example, an 'environmental rationality' gives precedence to ecological integrity while an 'economic rationality' gives priority to efficiency while a 'social reality' highlights the implications of equity. Integrating these rationalities within a unique policy instrument is rather challenging and any effort to do so is itself bounded by the limitations of a fourth 'legal rationality,' which can itself vary along a continuum of different incentive structures (such as coercion, transaction and conviction) embedded in the respective policy instrument chosen (for example, the 'rationality' of command and control regulation is intrinsically different from the 'rationality' of market instruments). Furthermore the perspectives to act are situational bound and can differ in time too. Given that the crop of 'UNCED Conventions' were all legally-binding Treaties and Conventions, policy-makers working on forest issues have become overly preoccupied only with this particular and limited rationality. The single-minded focus on the legal rationality of a binding treaty has blinded negotiators to other, possibly more innovative, policy rationalities, which could possibly lead to a more holistic governance approach. Although some small steps towards adopting a multi-pronged approach which also includes market mechanisms are now being adopted, these efforts are still young and yet to bear policy fruit (Hoogeveen et.al, 2008).

Returning to the 'wedge diagram' that was first introduced in Chapter 2 (Figure 2.2) we can begin tracing the dominant trends in policy approaches adopted at various points in the evolution of global forest governance. Prior to the 1980s, global forest governance took place piecemeal – on a country-by-country basis. The doctrine of state sovereignty over its natural resources has long dominated the issue of forest management, entrusting forest governance to the state-based legislative and regulatory processes. Developing countries, given their own colonial sensibilities, have been particularly apprehensive about an erosion of state sovereignty and a dilution of decision-making power and control over natural resources. For example, during the 1972 United Nations Conference on the Human Environment in Stockholm, developing countries insisted that Northern environmental concerns did not "interfere with their development agenda and that environmental policy should be left to the individual states" (Zelke, 1998: 281). Principle 21 of the Stockholm Declaration, in particular, was crafted to highlight that states retained sovereignty over resources within their territory, but also the responsibility to not cause environmental damage to other states by activities within their jurisdictions (UN, 1972).

By the time of the Rio Conference in 1992, states had become cognizant of the need for international standards of forest management and treatment. However, as we described in chapter 2, they were still unable to come to a consensus as to what standards should bind sovereign states. As a result, the Rio Summit failed to agree on a global forest

convention, although it did agree to a Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Forests (UN 1992: Annex III). Under the CBD, as another example, the Work Programme for Forest Biological Diversity emphasizes "conservation, sustainable use and benefit sharing; an enabling institutional and socio-economic environment; and knowledge, assessment and monitoring" (UNFF, 2004: 13). This work program is not binding, but provides for voluntary strategies for forest conservation. Thus a transition began gradually taking place from a sole focus on domestic regulatory instruments towards more international normative instruments.

Over the past fifteen years, there has been a constant push for a legally binding commitment on forests. Although no international convention has resulted, countries have made commitments (often reporting commitments) under other conventions and under non-legally binding instruments, which can be viewed as steps towards more international cooperation on the issue. For example, through the Kyoto Protocol of the UNFCCC countries have committed to providing national inventories of greenhouse gases and carbon sinks. Under the Joint Implementation and Clean Development Mechanism (CDM) countries may measure their emissions reductions from forestry projects (UNFF, 2004: 12). In 2002 and 2003, parties agreed to include afforestation and reforestation in the CDM commitments. After 15 years of discussions and negotiations, the UNFF reached final decisions on global objectives for action and the need for the establishment of a Non-legally Binding Instrument (NLBI). While this does represent a major breakthrough, it also highlights the recognition by the international community of the need for global action (Hoogeveen, 2007).

Of the three key questions that international forest negotiators have grappled with, it seems that on the first – the objectives of and rationale for global forest policy – there has been slow but perceptible progress forward and a recognition of the need for global action but without a clear articulation of exactly how (Hoogeveen, 2008). On the second issue – of the legal nature of the global instrument – the thrust has been for a legally binding instrument but a recognition is beginning to emerge that a more flexible and multi-dimensional 'legal rationality' may be needed which includes market and other innovative instruments. On the third issue – the means of implementation and its financing – the discussions are still embryonic and this remains one of the biggest challenges before international decision-makers.

5.3 Relevant Policy Instruments for Global Forest Governance: a closer look

The previous section has shown the broad context and evolution of global forest policy. In this section we will review some of the most relevant policy instruments that have been emerged through this evolution. These instruments not only form the current structure of whatever complex system of global forest governance we have, they are also the starting point for any future innovations in this system.

International instruments (or agreements) frequently contain an articulation of general principles and frameworks for action to address specific problems under the preview of

these instruments. They call for specific national level actions, such as the adoption of national regulations standards and implementation strategies. Other common provisions of such instruments include international cooperation, monitoring and reporting, research, exchange of information, well established dispute resolution processes, coordination among related agreements, and establishment of independent secretariats. Generally, international (legal) instruments contain clear statements regarding jurisdiction; standard, rule or norm formation; and remedial measures including sanctioning. Furthermore, scientific consensus, flexibility in achieving the instrument's objectives, involvement of stakeholders, existence of clear relationships to existing institutions, and an economic and political commitment are recognized as important elements. There are, however, multiple approaches that can be taken in structuring the instrument. For example, one approach is of creating strong supranational organizations with a high degree of centralized powers, including trade sanctions and other forms of sanctions; in the UN system the Security Council is the prime example of such an approach. This kind of approach with a strong emphasis on coercion is not the approach taken in the field of Agenda 21 and given the experience with international policy making in the field of natural resources seems not to be the right approach. A different approach would favour a more participatory approach with normative declarations that nations sign up to which are them progressively ramped up to more binding commitments. Most environmental agreements, including those on biodiversity and climate change have followed such an approach. Yet another approach would focus on a strong rule-based (as opposed to norm-based) governance structure with the ability to be flexible and dynamic, for example, open exchange of relevant information, a hierarchy of progressively applied liability rules, well established dispute resolution processes, coordination among related agreements, and establishment of independent secretariats. Trade agreements often follow such an approach.

However, despite years of international negotiation on sustainable development, many of the key principles – or at least the legal language to articulate these principles – remains contentious. For example, Box 5.1 lists a set of principles many of which have been articulated in multiple environment and development treaties (from Hunter et al., 1998). The fact that these principles have to be renegotiated in each treaty and that not all are encased in all treaties demonstrates that even at the level of essential principles, international sustainable development law still remains a work in progress, and many of the most fundamental legal principles still remain contentious and in need for greater clarity and clarification.

Box 5.1 Some Recurring Principles in International Environment and Development Agreements

State Sovereignty: State sovereignty in the legal sense underlines independence: the right to exercise, within a portion of the earth and to the exclusion of other states, the functions of a State such as the exercise of jurisdiction and enforcements of laws over their inhabitants therein. It reflects also the broad responsibilities, rights and powers that international law confirms with

'statehood'. Important in this context is that is affirms the national sovereignty over its natural resources.

Right to Development: the right to development exists of two components. The first one is that sovereign States exercise control over their resources and have the right to control their own economic, social and cultural development. The second component is that all people should enjoy a right to a certain minimum level of development, which should be measured in more than economic terms. In the context of global forest governance developing countries underscore the right of all countries and peoples to choose their own path of development, even if it means exploiting or over-exploiting their natural resources).

Common Heritage of Humankind: this principle reflects the areas on earth which are beyond the limits of national jurisdiction. Over half of the world's surface area lies outside the national borders of any one State, for example high seas, Antarctica, outer space etc. These global commons are captured in the 'common heritage of humankind'. Applied to a particular set of resources the Common heritage of Mankind has four characteristics: non-appropriation; international management; shared benefits; and reservation for peaceful purposes.

Common Concerns of Humankind: protecting the environment and achieving sustainable development are 'common concerns of humanity'. It implies that the global environment and achieving sustainable development can no longer be considered only within the national jurisdiction of states due to its global importance and consequences for human mankind. It reflects to need to joint conservation and to find ways through international cooperation to facilitate its conservation and sustainable use.

Obligation not to cause environmental harm: In international law context, States are under a general obligation not to use their territory, or to allow its territory to be used, in a way that can harm the interest of another State.. It was extended to environmental damage in the Trail Smelter arbitration.

State responsibility: this principle reflects the responsibility of a State for breaches of their obligations under international law, including for breaching the obligation not to cause environmental harm.

Intergenerational Equity: the principle is one of fairness in a sense that present generations should not leave future generations worse off by the choices we make today regarding development. Intergenerational equity requires to take into consideration the impact of our activities on future generations, giving them a place at the table in international decision making. As a minimum requirement the principle requires using natural resources sustainable and avoiding irreversible environmental damage.

Common but differentiated Responsibilities: all States have common responsibilities to protect the environment and promote sustainable development. But, because of different economic, social and ecological situations,

countries must shoulder different responsibilities. The principle reflects core elements of equity, placing more responsibility on developed countries and those that are more responsible for causing specific environmental problems.

Precautionary Principle: the principle is reflected in article 15 of the Rio declaration (UNCED, 1992): "where there are threats of serious irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental damage". It switches the burden of scientific proof necessary for policy responses from those who support prohibiting or reducing a potential damaging activity to those who want to continue the activity. The principle does not provide guidance on what action to except to limit them to 'cost-effective measures'.

Principle of prevention: this principle gives preference to environmental management policies that eliminate and reduce pollution before it occurs. It is closely related to the precautionary principle. In fact it is often viewed as one way to implement the precautionary principle.

Duty to Assess Environmental Impacts: the principle aims to ensure that before granting approval for an activity the appropriate government authorities have fully identified and considered the environmental effects of proposed activities under their jurisdiction and control and affected citizens have an opportunity to understand the proposed project or policy and to express their views to the authorities.

Principle of Subsidiarity: the principle reflects a preference for making decisions at the lowest level of government or social organization where the issue can be effectively managed. Subsidiarity thus not tell what the right decision in any given context is, but only where in the hierarchy the decision should be made.

Source: International Environmental Law and Policy, Hunter et all, 1998

Focussing more particularly on global forest instruments, although there is no global legally binding agreement on forests, there are already a number of instruments directly and indirectly affecting aspects of forest governance. A key aspect of the Agenda 21 approach to forest is to focus on the multiple roles and functions of forest, as shown in chapter 2. Only if the choice of instruments reflects these multiple role and functions of forests, implementation can be successful. It is therefore not without reason that increasingly forest actors realize that these instruments address forest issues in fragmented and uncoordinated ways. For example, the UNFF has identified at least 40 legally binding international instruments related to forests, of which six are protocols to framework conventions whilst another three are complementary stand-alone agreements to other framework conventions. Of the non-legally binding forest-related agreements and processes, the most relevant ones to global forests governance include the Millennium Development Goals (MDGs) and the Johannesburg Plan of Implementation (JPOI) of the World Summit on Sustainable Development (WSSD). Most of the remaining non-legally binding processes (apart from the Ministerial Conference for the Protection of Forests in Europe) tend to be comprised of a set of

negotiated proposals of an advisory nature to countries and international organizations. (Background document UNFF/AHEG, 2005)

The remainder of this section will briefly review the contents of the most relevant legally binding instruments, soft law instruments and provisions, and market-based and non-state instruments that relate to global forest governance.

a. Legally Binding Instruments

United Nations Framework Convention on Climate Change (UNFCCC). As we described in earlier chapters, forests are an important component of the global carbon cycle. They both influence and are influenced by climate change. Sustainable forest management, as well as avoided deforestation, afforestation and reforestation, can contribute towards emissions reductions and to carbon sequestration. Therefore, forests have been a major concern of global climate change policy from the very beginning. The UNFCCC, which was adopted in 1992 at UNCED, aims at stabilizing the concentration of greenhouse gases in the atmosphere so as to prevent dangerous human-induced changes to the global climate system. Parties to the UNFCCC committed themselves to carrying out national inventories of greenhouse gas emissions and carbon sinks, including forests. Industrialized countries and countries with economies in transition (so-called Annex I Parties) committed themselves to working towards voluntary goals in the reduction of emissions. These obligations were intensified and specified in the Kyoto Protocol, which was adopted at COP-3 of the UNFCCC, held in Kyoto, Japan in December 1997. The agreement entered into force on February 16, 2005. Currently 183 governments have become Parties to the Convention while 122 Parties have ratified or acceding to the Kyoto Protocol.

The Kyoto Protocol establishes three mechanisms, which collectively constitute a prototype international emissions trading framework or carbon market - International Emissions Trading, Joint Implementation and the Clean Development Mechanism (CDM). While Annex I countries are able to use the three Kyoto mechanisms to achieve their commitments, non-Annex I countries are only able to benefit from hosting afforestation and reforestation projects under the CDM. The Bali Action Plan – adopted at COP13 – provides a roadmap for the negotiation of a new regulatory framework for international action on climate change following the expiry of the first commitment period of the Kyoto Protocol in 2012. With regard to forests the Bali Action Plan calls for: "consideration of policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries." This is an important step towards the full integration of forests within the international climate change framework, although many challenges need to be overcome, including addressing the risks of leakage, lack of capacity for robust monitoring systems, a well-designed mechanism for linking forest abatement to carbon markets, and accessing funding from the private and public sectors as carbon market finance grows (Eliasch Review, 2008).

It is clear that at least in the near future, the UNFCCC will be playing an increasingly

important role in global forest governance. As climate change dominates the global agenda, the carbon sequestration role of forests is bound to attract ever more attention an resources, as it already has begun to do with REDD. The danger, however, is that as the global forest governance agenda becomes more and more focused on carbon stocks and sinks other forest interests could become relatively marginalized.

Convention on Biological Diversity (CBD). Although many of the articles of CBD apply to forest ecosystems, the Convention itself does not make specific mention of forests. In 1996 the Conference of Parties recommended that CBD should develop a work program in this regard. At the same time, it also discussed developing a protocol that could obviate the need for a global forest convention. In 1998, CBD adopted the CBD Work Program for Forest Biological Diversity, which focused on research, cooperation and technology development. It established an ad hoc technical expert group on forest biological diversity to make further progress on the issues.

Since then, CBD has expanded the focus of the Convention's program of work on forest biological diversity from research to action-oriented activities. CBD has encouraged the application of the ecosystem approach and noted the importance of supporting work on taxonomic, ecological and socioeconomic issues for the restoration of forest ecosystems and forest resources. It has also made reference to the IPF and IFF proposals for action, in particular those concerning the valuation of forest goods and services, and it stressed the need to harmonize the Convention's work with the IPF and IFF proposals for action on traditional forest-related knowledge. In 2002 CBD adopted an expanded Program of Work on Forest Biological Diversity, composed of three elements: conservation, sustainable use and benefit sharing; an enabling institutional and socio-economic environment; and knowledge, assessment and monitoring. The CBD work program on forest biological diversity is voluntary and not legally binding, there are no time-bound commitments or targets in its program of work.

CBD has closely collaborated with other members of the CPF on harmonizing and streamlining national reporting; and facilitate the full and effective participation of indigenous and local communities and other relevant stakeholders. (Background document UNFF/AHEG, 2005).

The activities within the CBD very much relate to one of the pillars of sustainable forest management: conserving and the sustainable use of forest resources. Although forests are closely linked with achieving the targets of the CBD there are other aspects of sustainable use that are possibly left out. There is also significant duplication and overlap with activities under the umbrella of UNFF. Here is a case that would benefit from much better coordination between the CBD and UNFF.

United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa (UNCCD). Forests are an important element to the UNCCD. As we described in chapter 3 forests perform important ecological functions that prevent desertification and arid conditions, stabilizing soils and water resources. Conversely, deforestation can foster both desertification and land degradation, particularly in arid, semiarid and sub humid regions. In addition to this ecological link, forest loss and desertification are

inter-connected in that the underlying socio-economic conditions and causes are very similar. Strategies to deal with desertification are likely to mitigate forest loss, and vice versa. The UNCCD, which entered into force in 1996, aims to combat desertification, mitigate the effects of drought and contribute to the achievement of sustainable development. This involves long-term strategies that focus on improved productivity of the land and rehabilitation, conservation and sustainable management of land and water resources, and work leading to improved living conditions; forests, and trees outside of forests, are relevant to all these strategies. Combating desertification requires a broad approach, incorporating most aspects of environmental management in the dry lands, which comprise one third of the Earth's land surface. UNCCD provides for Regional Implementation Annexes; those for Africa and Latin America and the Caribbean require national action programs to achieve the goals of the Convention in order ensure the integrated and sustainable management of natural resources, including forests. An important development for this instrument is the designation of the GEF as a financial mechanism to the UNCCD. The designation of GEF as a financing mechanism for UNCCD led since then to substantial funding under the focal area of land degradation.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Several threatened and endangered tree species have been listed in the appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which place various levels of control or restrictions on their trade. CITES Appendix III includes all species that any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the cooperation of other Parties in the control of trade. Appendix II includes: i) all species that, while not threatened with extinction, may become so unless trade in specimens of the species is subject to strict regulation; and ii) other species that must be subject to regulation so that trade in specimens of species referred to in i) above may be brought under effective control. Appendix I includes species threatened with extinction that are, or may be, affected by trade; trade in specimens of these species must be subject to particularly strict regulation in order not to endanger their survival further, and it must only be authorized in exceptional cases.

Controversy arose when attempts were made to list some major commercial tree species, such as mahogany, in the appendices in the 1990s. In 2002 during the 12th Conference of the Parties in Santiago, Chile agreement was reached on the inclusion of mahogany on Appendix II, followed by a similar decision on ramin at the next session in Bangkok, Thailand. Despite progress made on the regulation of some commercial timber species in the framework of CITES controversy remains.

It is clear that illegal logging and trade is and will be one of the main challenges for sustainable forest management in the years to come. CITES, although developed to regulate trade for certain species under certain conditions, has only a rather weak and narrow basis and mandate for addressing commercial trade in timber. If illegal trade is to be dealt with effectively, the most appropriate body to do so would be the WTO. This, once again, demonstrates the need for better coherence between the multiple

institutions that deal with different aspects of the forests problematique. Therefore is it crucial to make a distinction between the multiple role and functions of forests with regard to the choice of instruments. During the Ministerial Round Table session at the 14th Conference of the Parties in the Netherlands in June 2007 stark differences were expressed on the role of CITES vis-à-vis regulating commercial timber species.

International Tropical Timber Agreement (ITTA). The International Tropical Timber Agreement (ITTA) is a commodity agreement under the auspices of the United Nations Conference on Trade and Development (UNCTAD). The International Tropical Timber Organization (ITTO) was established under the auspices of the United Nations in 1986 amidst increasing worldwide concern for the fate of tropical forests. While almost everyone was alarmed at the rate of deforestation occurring in many tropical countries, there was also considerable agreement that the tropical timber trade was one of the keys to economic development in those same countries. The ultimate challenge was and still is how to produce more productive with less land. The reconciliation of these two seemingly disparate phenomena is ITTO's story. ITTO's origins can be traced back to 1976 when the long series of negotiations that led to the first International Tropical Timber Agreement (ITTA) began at the fourth session of the United Nations Conference on Trade and Development (UNCTAD) as part of that organization's Programme for Commodities. The eventual outcome of these negotiations was the ITTA, 1983, which governed the Organization's work until 31 December 1996, when it was superseded by the ITTA, 1994. Negotiations for a successor to this agreement were concluded in 2006, again under the auspices of UNCTAD.

As the first ITTA was being negotiated in the early 1980s, concern over the fate of tropical forests was increasing and the international community was being asked to take action. By then, conservation had become at least as important a consideration in the negotiations as trade. This was reflected in the preamble to the Agreement, in which conservation and trade were accorded equal importance. The creators of the Agreement believed that a flourishing trade in tropical timber, if based on a well-managed forest resource, could be a key to sustainable development, providing valuable foreign exchange and employment while protecting natural forests from destruction, degradation and excision. The ITTA that eventually came into operation was no conventional commodity agreement. It was, in reality, as much an agreement for forest conservation and development as for trade. In effect, it preceded the concerns, which featured in the 1987 Brundtland Report and at the Earth Summit in 1992, and its trade components were as much instruments for tropical forest conservation as ends in themselves. ITTA 2006 builds on the foundations of the previous agreements, focusing on the world tropical timber economy and the sustainable management of the resource base, simultaneously encouraging the timber trade and the improved management of the forests. In addition, it contains provisions for information sharing, including non-tropical timber trade data, and allows for the consideration of non-tropical timber issues as they relate to tropical timber.

ITTA’s potential lies mainly in developing projects for sustainable forest management in tropical countries. Effective implementation is hindered by lack of universal

membership and as a direct result of that lack of means of implementation, the narrow scope of the agreement – it addresses only certain elements (emphasis on conservation and trade) – and a strong focus on projects in stead of addressing also the related policies. This project focus, combined with a lack of universal membership leads to a rather narrow governance response to the much broader sustainable forest management agenda. In the process, many potentially useful opportunities from cross-institutional collaboration are missed.

World Trade Organization (WTO). The World Trade Organization (WTO) is the premier global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments. Although the WTO has no specific agreement dealing with the forests, a number of the WTO agreements include provisions dealing with related concerns. For example, the Agreement on Agriculture (AoA), the provisions under the Trade Related Intellectual Property Rights (TRIPS) Agreement, the environmental provisions of the Doha Mandate, discussions on product labelling, etc., all have deep bearing on forests and forests products and services. Furthermore, sustainable development and environmental protection are stated as key objectives in the preamble to the Agreement Establishing the WTO.

While the environmental dimensions – which has become increasingly important to the WTO in recent years, and especially so in the Doha Round – adds new salience to the forests dimension of international trade, the fact of the matter is that forests products have long been traded internationally and, therefore, are the subject of international trade law. In this sense, WTO provisions may be amongst the strongest available legally binding provisions effecting international trade in forests products. While these provisions have been traditionally written and are implemented from a trading perspective rather than a sustainable forest management perspective, they are central to the global governance of forests because WTO provisions tend to be stringently implemented and governments often tend to take them far more seriously than much of environmental law, which – even when it is technically 'legally binding' tends to be more declaratory than mandatory in its essence.

Notwithstanding the WTO's great potential the agenda of the trade negotiations leaves ample space for taking up the complex issue of illegal trade of forest products. As already mentioned, the WTO is most suited to deal with the illegal timber trade issue. However, viewing itself simply as a trade body, the WTO has shown a reluctance to do so because of priorities on other themes. Even as those from the forests side who do wish to act on this issue have found their own instruments and institutions lacking the mandate – and frankly the ability – to deal with this trade aspect. Indeed, right now their trying to do so might be in violation of WTO rules.

b. Soft Law: Non-Legally Binding Instruments

Agenda 21. Agenda 21, as we learned from chapter 2, is the principal document coming out of the 1992 Rio Earth Summit. Meant to be a global plan of action on sustainable development, this is a detailed and comprehensive which, although not legally binding,

has great salience as a baseline for sustainable development action. Chapter 11 of Agenda 21 deals exclusively with sustainable forest management. The objectives of this chapter area are as follows (UN, 1992):

- *To strengthen forest-related national institutions, to enhance the scope and effectiveness of activities related to the management, conservation and sustainable development of forests, and to effectively ensure the sus tainable utilization and production of forests' goods and services in both the developed and the developing countries; by the year 2000, to strengthen the capacities and capabilities of national institutions to en able them to acquire the necessary knowledge for the protection and co nservation of forests, as well as to expand their scope and, correspond ingly, enhance the effectiveness of programmes and activities related to the management and development of forests;*
- *To strengthen and improve human, technical and professional skills, as well as expertise and capabilities to effectively formulate and implement policies, plans, programmes, research and projects on management, con servation and sustainable development of all types of forests and forest-based resources, and forest lands inclusive, as well as other areas from which forest benefits can be derived.*

A key focus of the Agenda 21 approach to forests is to underscore the multiple roles and functions of all types of forests, forest lands and woodlands. Chapter 11 of Agenda 21 also emphasizes enhancing the protection, sustainable management and conservation of all forests, and the greening of degraded areas, through forest rehabilitation afforestation, reforestation and other rehabilitative means; promoting efficient utilization and assessment to recover the full valuation of the goods and services provided by forests, forest lands and woodlands and establishing and/or strengthening capacities for the planning, assessment and systematic observations of forests and related programmes, projects and activities, including commercial trade and processes. The actions mentioned are related to management-related activities; data and information; international and regional cooperation and coordination and means of implementation (financial and cost evaluation, scientific and technological means, human resource development, capacity-building and funding of international and regional cooperation.

Forest Principles. As a result of the intense debate and divisions around the forests issue at the Rio Earth Summit, it became impossible to conclude a formal agreement on forests (unlike climate change and biodiversity, on which Framework Conventions were concluded. The approach adopted in the run-up to Rio was the exact antithesis of the approach we are advocating here. Instead of dealing with forests as the complex issue it was, negotiators sough to simplify it and strip it down to is essentials. By the time they were done, all that remained were the naked differences. As a result, the forests issue had been so sliced and diced by the time it arrived at Rio that instead of highlighting the areas of common concern, all the areas of disagreement were pronounced. Not surprisingly, then, no forests agreement came out of the Earth Summit. What came out, instead, was a "Non-Legally Binding Authoritative Statement of Principles for a Global

Consensus on the Management, Conservation and Sustainable Development of All Forests" (See Appendix II for full text).

The hope – never fulfilled – was that the non-legally binding statement would eventually become the basis of a binding agreement. While that has yet to transpire, the experience of trying to formulate a consensus did have the salutary effect of highlighting why a piecemeal approach to making this complex issue was a recipe for failure. Even the act of crafting the non-binding statement required bringing in a host of issues that the proponents of a formal agreement had originally wished to keep out. Eventually, the thrust of the statement was to reformulate the forests problematique as a sustainable development issue by highlighting principles to "utilize, manage and develop their forests in accordance with their development needs" (UN 1992).

Although the Principles are declaratory soft law and are not legally binding, they do constitute a milestone because they have helped frame all post-Rio forest discussions, including discussions that led into and have flowed from the IPF/IFF, the UNFF and NLBI. In this regards, the actual impact of the Principles has been significant because they have become the basis of the context in which all current forest policy discussions take place.

IPF/IFF Proposals for Action. A successor step to the Rio Earth Summit and its search for better global forest management was the creation to the Intergovernmental Panel on Forests (IPF) which operated from 1995-1997, and its own successor institution, the Intergovernmental Forum on Forests (IFF) which operated from 1997-2000. For the purpose of this chapter our interest lies in the key 'instruments' and proposals for action emerging from these initiatives.

In particular, there was great hope at the time of the creation of the IPF that the panel would be able to build on the principles laid out in the non-binding Statement coming out of Rio and would be able to consolidate these into a more meaningful policy instrument. That hope was soon discarded as the substantive as well as the political complexity of the issue had already been exposed at Rio. Instead, the Intergovernmental Panel on Forests agreed to 86 proposals for action in 149 paragraphs to achieve sustainable forest management, which are reflected in the final report (Humphreys, 2006). The Intergovernmental Forum on Forests, successor to the IPF, resulted in 120 additional proposals for action to achieve sustainable forest management building upon the IPF proposals for action (UN document E/CN.17/2000/14, 'Report of the Intergovernmental Forum on Forests at its Fourth session, New York, 31 January-11 February 2000: 20 March 2000).

Analysis of the IPF proposals suggests that the bulk of them (50 out of 86) relate to national action rather than international. These proposals can be arranged into four categories – implementation of forest-related decisions of UNCED; international cooperation in financial assistance and technology transfer; scientific research, forest assessment and criteria and indicators for sustainable forest management; trade and environment in relation to forest products and services; and international organizations and multilateral institutions and instruments. The same issues have occupied the time and attention of the IFF since its inception in 1997. In particular, issues related to

international cooperation and means of implementation, including financial assistance and technology transfer was and remains one of central concern to the global governance of forests.

Although the proposals coming out of IPF or, subsequently, out of IFF do not have legal standing as global policy instruments, they do represent the locus of merging international opinion on issues related to global forests governance. It is clear from reviewing the proposals that the enthusiasm for a single and simplistic treaty arrangement that had marked the discussions at Rio has since given way to a more sobering realization that the inherent complexity of the forest issue cannot be wished away. The proposals of IPF clearly marked the multiple roles and functions of forests and addressed these in the proposals. Herewith the recognition of this complexity has increased; the hurdles of multilateral negotiations have not yet allowed decision-makers to arrive at meaningful ways to deal with this complexity at that juncture. However, there is a realization that an agreement on financial issues may be the key to resolving larger governance issues. More importantly, these proposals and the seedlings of soft law that they embody have begun to lay the path for a more nuanced and multi-pronged approach to global forests management.

World Summit on Sustainable Development/Johannesburg Plan of Implementation. The World Summit on Sustainable Development (WSSD), held in Johannesburg, South Africa in September 2002, took stock of 10 years of implementation of Agenda 21, and agreed on two main documents, the Plan of Implementation and the Johannesburg Declaration on Sustainable Development. The Plan of Implementation is a framework for action to implement Agenda 21, whereas the Declaration outlines the path taken from Rio to Johannesburg. Both documents emphasize the important linkages between poverty eradication, the protection of the environment and the sustainable use of natural resources.

Forest-related issues were highlighted at the Summit, particularly in the Plan of Implementation. In particular, Paragraph 45 focuses exclusively on forests and sustainable forest management and reflects the outcome of the Ministerial Declaration of the second session of the UNFF. The paragraph stressed, among other things, the key role of the United Nations Forum on Forests (UNFF) and the Collaborative Partnership on Forest to facilitate and coordinate implementation of SFM at the national, regional and global levels. It further identified SFM as essential in achieving sustainable development and as a critical means to eradicate poverty, to significantly reduce deforestation, to halt the loss of biodiversity, to prevent land and resource degradation, to improve food security and access to safe drinking water. In addition, it recognized the multiple benefits of both natural and planted forests and trees contribute to the well-being of the planet and humanity.

In addition, and perhaps more importantly, the Summit was the occasion for several countries to launch official WSSD partnerships, including public-private partnerships (discussed below). These so called type II initiatives included three major forest partnerships with regional focus, namely the Asia Forest Partnership, the Congo Basin Forest Partnership and the Model Forest Network in Latin America and the Caribbean

(see below). Several other forest-related partnerships were launched at WSSD, or have been announced since WSSD, including a forest landscape restoration initiative; system planning and management of transboundary ecosystem resources in south-western Amazon; and a public-private partnership for SFM.

Millennium Development Goals (MDG). The Millennium Development Goals (MDGs) were an effort to summarize and capture within a clearly articulated set of goals, targets and indicators the development aspirations agreed on at international conferences and world summits during the 1990s. At the end of the decade, world leaders summed up the key goals and targets in the Millennium Declaration, which was adopted in September 2000. The MDGs, include 8 goals, 18 targets and over 40 indicators, have significantly focused the work of the United Nations over the last few years.

The eight MDGs deal with poverty and hunger, education, gender equality, child health, maternal health, HIV/AIDS, environmental sustainability, and global partnerships. Notionally, forests issues are a part of MDG-7 on environmental sustainability. More specifically, Target 2 within this goal is to "reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss." Within this, one of the stated indicators is that "deforestation slows and more forests are designated for biodiversity conservation." Unfortunately, and unlike most other MDGs, the targets for this goal are hazy and non-specific. They give good intention without accountability for clear results. This is itself a testimony to the fact that despite years of international discussion we do not yet even have a clear consensus of what the 'target' state of global forests should be in real metrics.

However, as we have argued throughout this study, it would be a mistake to see only this specific target within this specific goal as the one that relates to global forests management. Indeed, as with most things dealing with development, the first goal – on absolute poverty – may be the most important one relating to the future of global forests. Although consumption issues are not at all dealt with in the MDGs, these too would have immense impact on the future of global forests. Although, in general, MDGs have had a perceptible impact on national programs in the area of forests this soft law instrument has not yet had much of an impact – largely because it failed to provide measurable indicators and targets and even more so because it has again focussed only on one element of global forests management rather than tackling the complexity of the issue in its various dimensions. Once again, we see a potentially very powerful soft law instrument being sub-optimally used because it fails to understand the nature of the problems at hand.

Non-Legally Binding Instrument on All Types of Forests (NLBI). After 15 years of discussions and negotiations, in 2007, the UNFF finally reached an agreement on a non-legally binding instrument on all types of forests, including 4 global objectives on forests. The long quest for a binding agreement that had begun well before the Rio Earth Summit may not yet have been laid to rest, but a sense that a drastically different approach was needed was put in place. This new global agreement, the "Non-Legally Binding Instrument on All Types of Forests" (NLBI), calls for greater international

cooperation, an enabling environment and national action to reduce deforestation, reverse the loss of forest cover, prevent forest degradation, promote sustainable livelihoods, and reduce poverty for all forest-dependent peoples.

This instrument aims to strengthen political commitment and action at all levels to implement effectively sustainable management of all types of forests and to achieve the shared global objectives on forests; enhance the contribution of forests to the achievement of the internationally agreed development goals, including the Millennium Development Goals, in particular with respect to poverty eradication and environmental sustainability; and provide a framework for national action and international cooperation (UNGA, 2007). This instrument is voluntary and non-legally binding and applies to all types of forests. It recognizes sustainable forest management as a dynamic and evolving concept, and defines its aim as maintaining and enhancing the economic, social and environmental values of all types of forests, for the benefit of present and future generations. In essence, the NLBI has accepted that a narrowly focussed binding agreement – which focuses either on a single type of forests use or a specific type of forests only – is neither politically feasible at this time, nor necessarily desirable. Non-binding as it might be, this important soft law instrument is an important step forward towards a more nuanced and multi-faceted approach that is structured around a portfolio of instruments, rather than solitary silver bullets.

The NLBI asks also for measures at the international level, such as concerted efforts to secure sustained high-level political commitment to strengthen the means of implementation for sustainable forest management, including financial resources, to provide support, in particular for developing countries as well as countries with economies in transition, as well as to mobilize and provide significantly increased new and additional financial resources from private, public, domestic and international sources to and within developing countries as well as countries with economies in transition.

Although the adoption of the NLBI has been seen by some as a landmark event (Asadi, 2008) and a significant step forwards, the real test of its relevance lies in its implementation. It signifies the recognition that action does not necessitate a binding agreement, however, the NLBI has yet to demonstrate its potential. The key to the NLBI's efficacy lies in agreeing on, and implementing, a global financial mechanism capitalizing on new ideas developed during UNFF-7 (see below under section Means of implementation). The failure of reaching an agreement at UNFF-8 is a reminder that doing so is not easy and the governance system itself is quite capable of rejecting and resisting innovations that fundamentally question it.

c. Market-Based and Non-State Instruments

The preceding analysis suggests that a novel system of accountability has emerged in the area of global forest governance (Chan and Pattberg, 2008). A transformation of accountability has progressed through different stages. The traditional state-based system accountability system faced a major challenge in the light of an intensifying forest crisis and the failure of governments to react to the demands of citizens to halt

deforestation and forest degradation. As a result of changing actor strategies and relations, corporations moved to the forefront of the debate, both as a cause and potential solution to the forest problem. As a reaction to the accountability deficit of business-driven schemes and within the context of an increasingly paralyzed international negotiation process a cooperative private regime that combines market mechanisms with the credibility of civil society organizations has emerged.

Independent Forest Certification. Certification is one of the most important non-state compliance mechanisms. Forest certification is the process by which an independent third party certifies that a process or forest product conforms to agreed standards and requirements (Gulbrandson, Arts, 2004). There are two types of certification: system based standards and performance based standards. System-based standards look at the entire process of production of a product, while performance-based standards look only at how the product performs. Although product certification has proved to be a very effective means of international governance – and maybe because of that very reason - it is also one of the more contentious issues in sustainable forest governance because it relates directly to trade. Because states have been hesitant to enter into binding arrangements regarding forests certification, non-state actors have entered the certification space and have created a number of very effective programs, probably none is better known than the Forest Stewardship Council (FSC).

Based on initiatives of the World Wildlife Fund (WWF), the FSC was created in 1993 and includes a number of other leading NGOs like Greenpeace and the Rainforest Alliance. The FSC is simultaneously a partnership of NGO's, a business, as well as a certification program (Bendell, 2000). It is also a recognition on the part of major environmental NGOs as well as corporations that profit-making and responsible corporate behaviour need not necessarily be at odds with each other (Arts, Buizer, Forest Policy and Economics, 2006). But most importantly, for our purpose, it is also a governance instrument because in very practical ways its certification program ends up significantly influencing international trade flows in forests products and, in fact, impacting the management of large forest tracts. Working directly with the private sector the FSC established nine principles for well managed forests, which were revised in 1996 and 2000, during which time a tenth principle was added (See Box 5.2). These principles form the basis of a certification scheme.

Box 5.2 Forest Stewardship Council Principles

1. Compliance with laws and FSC Principles: Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and criteria.

2. Tenure and use rights and responsibilities: Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

3. Indigenous peoples' rights: The legal and customary rights of indigenous peoples to own, use and manage their lands, territories and resources shall be recognized and respected.

4. Community relations and workers' rights: Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.

5. Benefits from the forest: Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

6. Environmental impact: Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

7. Management plan: A management plan - appropriate to the scale and plan of the operations – shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

8. Monitoring and assessment: Monitoring shall be conducted – appropriate to the scale and intensity of forest management – to asses the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

9. Maintenance of high conservation value forests: Management activities in high conservation value forests shall maintain or enhance the attributes, which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

10. Plantations: Plantations shall be planned and managed in accordance with Principles and Criteria 1 to 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's need for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

Source: FSC Principles and Criteria for Forest Stewardship, Document 1.2, Revised February 2000, Oaxaca: FCS.

Because of the relative success of FSC certification – which now amounts to more than 100 million hectares worldwide - competitor certification schemes have been developed in Canada (the Canada Standard Association (CSA)) and in the US (US Sustainable Forestry Initiative (SFI)). In Europe the Pan-European Forest Certification (PEFC) was launched in 1999. Currently about two-thirds of certified forests are certified by PEFC, and one-third by FSC. The area covered by certification has grown from 44 million ha in 2000 to 300 million ha in 2007, but this still represents only about 8% of the 3.9 billion ha of forested land. Only 1% of tropical forests are certified (Cerulli, 2009).

Although this proliferation of certification schemes and the variations within them has raised unresolved governance challenges of its own, the success of non-state-based certification and the corporate support it has received, have demonstrated the efficacy of the general proposition. But they also demonstrate that while such schemes can and should be a part of the portfolio of instruments for better global forest governance, they cannot – in and of themselves – be the central solution.

Ministerial Processes for Forest Law Enforcement and Governance (FLEG). In May, 1998, the G-8 launched an action program on forests focussing on the elimination of illegal logging and illegal timber trade. The action program sought to complement actions undertaken at regional and international levels, and states the G-8's commitment to identifying actions in both producer and consumer countries. Several FLEG processes are now running in parallel. The issue of illegal logging has come to the fore in international forest policy debates since 2000, highlighting much wider issues such as appropriate forest governance, effective law enforcement, trade, and investment.

The G-8 action program motivated a partnership on forest law enforcement for East Asia between the World Bank, the UK and the US, which led to the FLEG East Asia Ministerial Conference in September 2001. The Conference adopted a Ministerial Declaration, whereby participating countries committed themselves to, inter alia, intensify national efforts and strengthen bilateral, regional and multilateral collaboration to address forest crime and violations of forest law. Soon afterwards, Ministers from several countries in Africa expressed interest in focusing specifically on forest law enforcement and governance, and asked assistance from the World Bank (with sponsorship from the United States, UK and France) to convene an African FLEG Ministerial process. The AFLEG Ministerial Conference convened in Yaoundé, Cameroon in October 2003, drawing together ministers from Africa, Europe and North America. The Conference resulted in the endorsement of a Ministerial Declaration and Action Plan for AFLEG. The AFLEG process is part of the New Partnership for Africa's Development (NEPAD) and is intended to strengthen international and multi-stakeholder commitment.

In May 2003, the European Union published its Action Plan on Forest Law Enforcement, Governance and Trade. This outlines proposals for voluntary licensing to ensure that only legally verified timber could be imported into the EU, procurement policies that discriminate against illegal timber, encouragement of responsible financing, and support for private sector-led trade initiatives. The FLEG processes around the world have also opened space for action and calls for accountability by civil society. In Latin America, for example, where an official FLEG process is in the pipeline, civil society is particularly active.

Although there remains strong potential to further develop and scale-up FLEG initiatives, its true value lies in the political commitment to implementation on the ground. Recognizing this key condition, up to now progress has been slow and uneven. Furthermore, the limited scope of FLEG remains a stumbling block.

Public-Private Mechanisms. Binding lawmaking, rule design and control of compliance, both at the national and international level, are the classical approaches of governments. Developments in sustainable development governance as well as in sustainable forest governance have shown that they are being complemented and, to some extent, being replaced by other types of policy instruments, especially private sector based instruments. One such instrument is the so-called 'public-private partnerships' (PPPs) which rely on the voluntary commitments of non-state actors, working in collaboration with states, in order to accelerate the implementation of sustainable development goals (Bartsch, 2006; Visseren-Hamakers and Glasbergen, 2006).

As Martens (2007, p.4) aptly put "'Partnerships' as a term is rapidly becoming the new mantra shaping the UN discourse on global politics. In fact, the term now covers virtually every interaction between state and non-state actors, particularly between the UN and the business sector." Partnerships indeed represent a vast multiplicity of projects, institutional models, and networks; with diverse geographical scopes, durations, and issue areas (Biermann et al., 2007). In contrast to the Rio Summit whose principal focus was on norm and rule creation, the focus of the Johannesburg Summit on Sustainable Development was on policy implementation. The notion of 'public-private partnerships' that came out of WSSD was informed by this notion. As Mert (2009) points out: "The change taking place can be summarised as a shift towards deregulation in certain areas and levels of governance, an emphasis on voluntary schemes, increasing deployment of market based approaches, and a change in the nature of non-state actor involvement in decision making (from activities that focus on influencing governmental decision-making such as lobbying or agenda setting, to actual rule making and standard setting)."

A number of the public-private partnerships announced at WSSD were related to forests. Three examples are given in Box 5.3.

Box 5.3 Examples of PPPs on Forests

Asia Forest Partnership: The Government of Japan and its partners, including several other governments, intergovernmental organizations and NGOs, launched the Asia Forest Partnership to promote sustainable forest management in the region. The collaborative arrangement addresses issues related to good governance and law enforcement, capacity building, illegal logging, forest fires and degraded lands. Building on international and regional activities, cooperation extends to such areas as the development of forest policies, plans and programs; the use of satellite data and mapping; participatory management; human and institutional development; and intersectoral coordination within governments. The partnership expects to enhance ongoing sustainable forest management initiatives by providing a framework for conducting research.

Congo Basin Forest Partnership: At WSSD, the Governments of South Africa and the United States, along with Conservation International, WWF, the Wildlife Conservation Society and many others, announced the establishment of the

Congo Basin Forest Partnership to promote economic development, alleviate poverty, improve governance and enhance conservation of natural resources in the region. These shared goals are pursued through a network of national parks and protected areas, well managed forestry concessions and assistance to communities that depend on forest and wildlife resources in several key landscapes in six Central African countries: Cameroon, the Central African Republic, the Congo, the Democratic Republic of the Congo, Equatorial Guinea and Gabon. Working together, governments, business and civil society are committed to investing time, energy and resources to bring about positive change in natural resource management and sustainable livelihoods in one of the world's largest blocks of intact and interconnected tropical rain forest.

Model Forest Network in Latin America and the Caribbean: This collaborative initiative supports the development and establishment of a Regional Network of Model Forests in Latin America and the Caribbean. Model Forests are about translating higher-level policy goals into achievable and locally relevant models of sustainable use and best practices for the conservation of all forest resources. They use locally-based partnership to find working solutions to forest resource management issues through capacity building, improved decision-making and governance systems, economic diversification, integrated resource management, and poverty alleviation. Its lead partner is the "International Model Forest Network Secretariat" (Canada) and the 25. Governments of Canada, Argentina, Chile and the Dominican Republic, together with the United Nations Development Programme, are involved in the partnership.

Although this market-based governance response has potential, it has also its constrains:

- First, private governance in the form of certification may systematically benefit some types of actors while it clearly disadvantages other players in the field;
- Second, the need to secure long-term financial stability for private systems of rules, includes the possibility of moving from an independent non-profit system agent to a business of its own;
- Third, to function as an effective mechanism of governance towards sustainable de velopment, market based systems have to overcome to basic obstacles: (i) the demand for green or socially acceptable products needs to be sufficiently high and stable to change business practices beyond shortlived public relations campaigns, (ii) a suffi cient supply of certified products is needed, without a visible appearance in the mar ket, certified products cannot compete with their non-certified competitors.
- Fourth, the tendency of multiple competing schemes within and across issue areas, resulting in the risks of softening the "voluntary approach" (Pattberg, 2005).

5.4 Constraints to Implementation

The global forest governance system has been prolific in negotiating agreements, but,

except for a few exceptions, has a rather dismal record in turning agreements into actual change and implementation on the ground. Lack of implementation, coordination, compliance, enforcement and effectiveness is a common problem in the international system (Najam, 2006). The crux of the challenge is that system has been so frantically obsessed with negotiations which were more process than content related, that it has paid little attention to implementation. Since negotiation happens internationally and implementation happens domestically, it is not surprising that a system composed mainly to 'negotiators' will do exactly that which they do best: negotiate. However, implementation of negotiated texts requires that actors have the intention and capacity to make them work domestically (Zaelke et al, eds, 2005; Weiss and Jacobsen, eds, 2001). There are also at least three key hurdles at the global level that have constrained the implementation on global forest issues: a lack of financial resources, a lack of the means to compliance and enforcement, and sovereignty concerns.

(a) Financing

Financial constraints – especially for developing countries – are clearly amongst the most important hurdles to implementation. Mobilizing new and additional financial resources for sustainable forest management is certainly the hurdle that is most talked about and which generated the most heated debates. Developing countries would like to have such resources provided by richer, more industrialized countries and would like the financing to be dependable, sufficient and without strings attached. Donor countries would prefer to keep their contributions low and seek safeguards and transparency in the use of whatever resources they provide. Everyone seems to agree that nearly not enough resources are actually available and resources that are available are used ineffectively (Najam, Papa, Taiyab, 2006). Therein lies the problem.

Forest financing sources are classified into public and private, national and international. Domestic funding may come from general government revenue and revenue from state-owned forests. Private sources consist of forest owners, communities and forest industry, philanthropic funds and donors, as well as non-governmental organizations (NGOs) of various types. In the case of many NGOs funds are raised from external sources. International public sources include bilateral aid agencies and multilateral financing institutions. Private sources are diversified, consisting of institutional and individual investors, the forest industry, various NGOs etc. Foreign private financing can be direct or investment and loans or credits. The current annual bilateral and multilateral flows to forests are estimated at about USD 1.9 billion and the foreign direct investment (FDI) to industries at about USD 0.5 billion. The ODA to forests includes about USD 700 million for forest conservation in 2007. In addition, the conservation NGOs and philanthropy sector focuses on this thematic area. (PROFOR, 2008).

Bilateral ODA to forests has mainly come from relative few sources: 95 percent is provided by nine donors. On the receiving end, bilateral ODA is also concentrated among recipient countries. In 2006, India absorbed 22 percent of the total forestry ODA, followed by China (13 percent) and Vietnam (12 percent). Together with Bolivia, Brazil, Cameroon, Columbia, Honduras, Indonesia, and Tanzania, these 10 countries received

two-thirds of the total foresty ODA, which is therefore fairly highly concentrated (PROFOR, 2008).

Multilateral financing to forests is estimated at USD 0.8 billion per year in 2005-2007. The main source is the World Bank Group (WBG), and its share in the total has increased from 51 percent to 73 percent in 2000-2007. The other multilateral sources have a volumewise limited – but strategically important – role for contributing to the management of forests. On private sector investments there is no systematic information available on domestic or private foreign direct investment in the forest sector in developing countries. There is, however, a common view that the bulk of the forestry investment is from domestic sources by the formal private sector and by communities, landowners, and farmers.

Financing sources		Domestic	International
Public	**Governments**	Investments by national and local governments through subsidies, soft loans, non-monetary incentives, direct investment.	- Bilateral ODA (grants, recoverable grants, concessional loans, etc.) Multilateral ODA institutions: IDA, GEF, ITTO, FAO, UNEP, UNDP, GM, regional development banks (grants, investment lending, investment guarantees) Multilateral targeted programmes: PROFOR, FLEG, CGIAR, BPF, NFP (grants, co-financing) Multilateral financial institutions: IFC, IBRD, regional developments banks
Private	**Forest industry**	Direct investments (incl. SMEs)	Foreign direct investment (FDI)
	Financial institutions and institutional investors	Short and long term credit Portfolio investment Targeted credits Insurance and re-insurance	Short and long term credit Portfolio investment Export credits Guarantee instruments Insurance and re-insurance
	Philanthropic	Financial support to national NGOs and targeted beneficiary groups	Financial support to international NGOs and targeted beneficiary groups
	Conservation NGOs (self-financing)	Financial support to national NGOs and targeted beneficiaries (project funding)	Financial support to international NGOs (programme/project funding) Twinning arrangements
	Other NGOs and civil society organizations (CSOs) (self-financing)	Financial support to national CSOs and targeted beneficiaries (project funding)	Financial support to international CSOs (programme/project funding) Twinning arrangements
Payments for environmental services (PES)		Watershed protection payments Carbon payments Fresh water supply payments Nature-based/eco-tourism Landscape, recreation and other payments for forest services	Carbon payments (regulatory & voluntary market) Biodiversity Nature-based/eco-tourism Bioprospecting

Sources: Moura Costa et al. 1999, Sander, pers. comm., author's elaboration.

TABLE 5.1 Overview of Forest Financing Sources

Source: Markku Simula, 2008. Financing Flows and Needs to Implement the Non-Legally Binding Instrument on All Types of Forests. Washington, DC: The Program on Forests (PROFOR) of the World Bank.

Table 5.1 highlights the fact that financial and technical resources for forests and forest related activities do not always come from obvious sources. Moreover, while resources – both financial and human – may be available, they are not always mobilized in ways that can benefit those who most need them. Traditionally, the response to financial constraints has been the call for more financing from international sources. However, there have never been significant resources available, and they are unlikely to become available anytime soon.

More recently, some have begun to argue that we need to broaden our search for resources beyond the traditional sources. It has been argued that there may be opportunities for new resource generation from within the private and philanthropic sectors and from market based instruments (Hoogeveen et.al., 2008). The call for devising multi-dimensional global financial mechanisms that capitalizes on the energies of governments, private sector, and civil society to mobilize resources for forest-related activities has begun to find resonance. As Box 5.4 details it is neither easy nor simple to introduce new and innovative financial mechanisms, but if leadership and negotiation tact is present, it is possible.

Box 5.4 How to Bring New Ideas Into the System

Ever since the Rio conference a fierce debate had raged between developing countries seeking a global forest fund and industrialized countries advocating for better use of existing financial arrangements. This question of how to handle forest finance and the generation of new and additional resources at the global level was clearly a defining issue for the future of the NLBI. Over 15 years of discussion on the subject, positions had hardened, arguments had been ritualistically repeated, negotiations had become increasingly personal, and the issue of financing had become a battle that had full potential to fully derail the process and any hopes for the NLBI.

Against this background UNFF-7 (2008) was faced with an almost impossible task to find a breakthrough after 15 years of stalled negotiations on financing and with still many of the same negotiators sitting at the table. Certainly new ideas couldn't be found among the negotiators who had locked themselves in fixed positions for so many years that the ideas had themselves fossilize. To seek a response to the stalemate, the Chair of UNFF decided to organize two informal brainstorm sessions with a small group of international governance scholars from the Fletcher School of Law and Diplomacy, Tufts University, to develop innovative approaches and out of the box ideas. A former head of the UNFF secretariat was also invited to inject context and a reality check into the brainstorming. Reviewing a whole array of possibilities for raising financing for forests, the brainstormers developed a so-called 'portfolio approach' which integrated financial resources from public sources, private sources and philanthropic initiatives, and other innovative means.

But a good idea can take you only that far. The next question was how to introduce the new conceptual approach into a negotiation process that was deeply entrenched and adversarial. The Chair had the authority to introduce new ideas

into the negotiations, but this was a high-risk approach that could threaten the credibility of the Chair and possibly undermine his authority by turning him into the partisan proponent of a particular idea rather than the neutral arbiter of the common consensus. Instead it was important to allow the idea to be introduced by an outside third party who enjoyed credibility within the UNFF and to first test it with key constituents and states to gauge its acceptability.

To overcome potential resistance from member states during the negotiations by dismissing the new ideas designed by this unfamiliar group of individuals, the Chair decided to share the informal paper with key World Bank experts en marge of an intergovernmental preparatory meeting in December 2006. The chair requested the World Bank representative to further develop this new proposal and introduce their findings at UNFF-7 a few months later to see how countries reacted to it. Not surprisingly, the final report of the World Bank strongly resembled the original report of the Fletcher team and proved to facilitate the breakthrough during the negotiations. Most delegations welcomed the innovative ideas presented by the World Bank who eventually claimed ownership of it. Indeed, they did so with enough enthusiasm that by the end of UNFF-7, the portfolio approach had been adopted as the preferred mechanism for global financing for forests.

(b) Compliance and Enforcement

Whatever is internationally agreed, the proof of the pudding is in the eating, namely successful implementation. Political commitment to implement policies and take actions at the national and local level is the foremost important aspect for successful implementation. Compliance is often used in the context of legally binding instruments. However, the term compliance is used more and more broadly, namely for all kind of mechanisms, even for non-legally binding instruments, that assure accountability for implementing agreed policies, measures and actions. However, in an international system that is anarchic by definition, states will comply only if they wish to and there are very few tools for meaningful enforcement of commitments they may have made. Therein lies the constraint to implementation: compliance, in the absence of the means of enforcement, can be desired but not assured.

In the absence of means of enforcement or of dispute resolution, sustainable development regimes have developed under a very different logic from other regimes like, for example, the rule-based trade regime. Environmental regimes are relatively new and predominantly norm-driven where the instrument of compliance is persuasion and assistance; i.e., carrots and carrots (Najam, et al. 2006). Therefore, the primary goal of compliance mechanisms is usually to bring parties into compliance rather than to punish them for non-compliance. When non-compliance is due to disregard for obligations, compliance mechanisms may use a "stick" such as "naming and shaming" or sanctions. Others may focus on incentives.

So compliance mechanisms are still at the developmental stage. For example, the Climate Treaty (Kyoto Protocol) and the Biodiversity Treaty (Biosafety Protocol) still

have no functioning compliance mechanisms, despite the fact that they are provided for in the treaties. In practice, we find that treaties which link the compliance mechanism to trade sanctions have the intended effective implementation, as is the case with WTO and CITES, although CITES still has great difficulty in implementing sanctions. While compliance and enforcement is weak in all sustainable development regimes, it is even weaker on forests. Even the normative agreements that have been reached in other conventions has been absent on forests and therefore there is not much to comply with either. Moreover, because forest implementation can only be local, compliance can also only be local and very often becomes a subject of domestic rather than international policy. Creating an enabling environment, which includes incentives, financial resources and authority, is the key for successful national implementation. Compliance is only the final piece of the puzzle.

(c) Sovereignty

Simply to use the word 'global' in a world that is still organized around nation states is to invite a discussion on the concept of sovereignty and what it means in a globalizing world with global challenges. The notion is sovereignty – that individual nations have full and sole rights to deal with their own resources as they wish – is something that all global issues have to deal with to some extent, something that sustainable development has to deal with to great extent, and something that becomes particularly thorny in the forests debate. Because forests are on territory and because territory is the very basis of sovereignty, this concept has tended to become particularly sensitive in forests debate. Unlike the upper atmosphere, or even the deep seas, to which individual nations cannot stake a claim, forests are clearly within national territories and therefore are 'national' and not 'global' resources. The impacts of what happens in national forest can be global, but it is an established principle of international policy that forests are sovereign national territory. The question, then, is how do we make and implement global policy on what is clearly national territory?

This, in fact, is one reason why global agreements on forests have remained illusive. Increasingly, however, a realization has set in that the purpose of global diplomacy on forests is not to 'negotiate' over sovereignty but to strike global deals that allow individual nations to align their national (sovereign) interests with the global good. The nature of forests makes them a international public good. Moreover, citizens within each nation are also citizens of the globe and very often they demand the national policy meets their individual interests both as national citizens and as global citizens. Many citizen groups working on forest issues, for example, are global groups. By working together, highly motivated local activists can achieve the competence and credibility to bring the full weight of international opinion to bear on governments. At the same time they are representing conflicting ideas, not connected to the decision0making processes and are in cases undermine local intiatives.

Importantly, we should also note that the perceptions of sovereignty are slowly changing and there is strong pressure – domestically as well as internationally – to act when global commons are threatened (Chayes and Chayes, 1995). But, these developments

lead to the need of governments to play a stronger role within the globalizing world. Globalization will put new demands on government, to set domestic policies which are in line with international and regional policies and to intervene proactively in the setting of global policies and actions so that they reflect not only global, but also national priorities.

5.5 Concluding Thoughts

Effective implementation needs a paradigm shift in the way current societies and organizations are governed (Pierre, 2000). Due to processes such as increasing state failure, market liberalization, internationalization, decentralization and individualization, the old paradigm of top-down, state-led, 'command and control' ways of steering no longer suffice. Instead, new forms of multi-actor and multi-level governance and new types of policy instruments have been propagated: network-like arrangements of public and private actors, self-regulation by market organizations, public-private partnerships, emission trading schemes, covenants, certification programs, etc. (Bendell, 2000; Glasbergen et al., 2007; Kickert et al., 1997). Besides public-voluntary ones, private rules, such as certification programs have been introduced. Here, independent, private systems of monitoring, verification and accreditation have been set up to build up credibility among producers and consumers (Cashore et al., 2004.). These systems appear relatively successful, at least more successful in terms of enforcing compliance than the voluntary approaches of governments.

All of this feeds into the concerns that the international system related to sustainable forest management is operating at a suboptimal level: its agreements, institutions and resources are unable to achieve their full potential and possible synergies remain unexploited. The very ability to address complex interconnected forest challenges is questioned because the incoherent system of solutions is becoming even more complex than the problems it was meant to address. The next, and final, chapter will, inter alia, seek to outline the contours of a new diplomacy that could respond to this very challenge.

Chapter 6

Conclusions: A New Diplomacy for the Global Governance of Forests

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Any theoretical approach to understanding cooperation and discord at a global level needs to recognize the multiplicity of variables that jointly affect outcomes. But for our scientific knowledge to increase, we need to focus at any one time on a limited set of explanatory variables. In thinking about such explanatory variables, we began by seeking to categorize potential variables according to whether research and thinking were likely to yield intellectual progress. We began this study with the realization that much of what needs to be done to manage our world's forests better has to be done nationally, even locally. Nothing in the preceding chapters has changed that assumption. However, this study has purposely sought to focus on the global governance of forests not simply because recent years have seen multiple efforts to find global governance solutions to forest challenges but, more importantly, because global decisions and structures have the ability to directly impact – negatively or positively – the direction of what happens locally. The goal is to expand our understanding of the system of global forest governance and its underlying patterns and what kind of decisions and action are needed to achieve the agreed goals, objections and targets. Bad decisions and inefficient institutions at the global level can not only distract from, they can actually impede, good efforts at the domestic and local levels (Banuri, et al., 2002). Conversely, good decisions and effective institutions at the global level have the potential to not just facilitate but propel good outcomes at the domestic and local level – the level where these outcomes mean the most (Banuri. et al, 2002). This is so for most issues, and particularly so for the complex and interconnected challenges of sustainable development.

As the first decade of the twenty-first century comes to a close, mounting challenges facing the world are characterized by the intensifying interconnectedness of global and regional issues: political tensions, , financial, economic and food crises, climate change, water shortages, ecosystem disruptions, increasing instability and persistent poverty. The food riots around the world in 2008 were manifestations of this trend that blurs the boundaries between political, climate, energy, agriculture, trade, technology and other factors. Later, the financial crisis and economic crisis demonstrated how quickly national calamities could spread and affect development strategies far beyond the financial and economic arena in one country, requiring international responses (Friedrich et.al., 2009). In all these crises, the disjuncture between their global nature and the national centers of decision-making was obvious. The current multiple and interrelated crises have demonstrated the inadequacy of the global governance system and highlighted the need for new approaches. Such changes usually take a very long

time. The need for a strategic reorientation of our governance system underlies the recommendations for analysis and research that follows.

How, then, as we attempted to cover in this research, do we move towards creating better decisions and more effective institutions for the global governance of forests? And, what can we learn about how the evolving system of the diplomacy of global forest governance works by analyzing the components of the system that others have missed by using more piecemeal approaches? Building on the research findings presented in the previous chapters, this concluding chapter seeks to respond to these research questions and, by doing so, outlines an indicative agenda for future scholarly work on the effectiveness of the evolving system of sustainable development diplomacy.

The task, then, is to pinpoint the determinants of success or failure in efforts to form an effective system of global forest governance in international society. In this concluding chapter, we consolidate this process by deriving some hypotheses about factors governing the likelihood of success in efforts to develop effective governance systems and applying these hypotheses, in a preliminary way, to the system of global forest governance.

Based on the evidence from our analysis of the working of the global forest governance in practice of the last 16 years (inductive approach), compared with the available research and literature (deductive approach) our response to the overarching question how the system of the diplomacy of global forest governance, analyzing the three components (issues, actors and institutions and policy instrumentation) in an integrated way can be made more effective in order to achieve the internationally agreed goals, objectives and targets is predicated on three key overarching propositions related to, respectively, the analytical framework, the policy response and the methodological approach relevant to the system of global forest governance.

➢ First, that with any given challenge, the complexity of the solution has to match the complexity of the problem. As Chapter 3 illustrates, global forest governance is driven by the multiple linkages and multifaceted complexity of forest-related issues – such as climate change, trade and biodiversity. Adding to the complexity is a wide range of actors, as described in Chapter 4, and a multitude of policy tools presented in Chapter 5. Therefore, global forest governance is a highly interlinked and complex system that is the sum of organizations, policy instruments, financing mechanisms, rules, procedures, and norms that regulate forest processes – and, on a broader level, sustainable development – at the global, national, and local levels. The current system has the tendency to simplify the problem in order to develop to make the problem more manageable. Our analysis showed that more effective global forest governance will come not from addressing any one (or a few) of these elements, but from systematically tackling these myriad elements of global diplomacy and governance and, more importantly, the linkages between them. This makes the global governance of forests what social scientists call a 'wicked problem' (Rittel and Weber, 1973): a problem that is inherently complex and to which there are no simple solutions, because of complex interconnections. The simplification of forest policy into a continuing battle between 'protecting forests' from human intrusion, use or exploitation on the one hand and 'utilizing forests' for legitimate livelihoods or land conversion on the other has led to suboptimal outcomes (World Bank,

2004). More recently, the sudden spike in interest in forests as a 'carbon sink' has again raised fears that other uses of forests, including for human habitation and use, could be overwhelmed by this new interest (TFD, 2008). Meanwhile, the continuing loss of valuable environmental services because of destructive forest management and utilization practices, and the inability to halt continuing illegal exploitation of forest resources is impeding sustainable development and the improvement of human wellbeing worldwide (Christy, et.al., 2007). Indeed, by definition of the problem, simple solutions become ineffective. Solutions that seek to 'simplify' the problem by assuming away part of the complexity are doomed to failure because of the inherent complexity of the issues. Recognizing the ongoing-desire of decision-makers for stability and simplification, an important conclusion of our research is the notion that complexity is here to stay and that it can be looked upon not necessarily as a constraint but possibly as a vehicle of progress that contributes to more effective governance systems (Teisman et.al., 2008).

➢ Our second proposition flows directly from the above and posits the need – indeed, the necessity – for a 'new diplomacy' that recognizes not only the inherent complexity of the issue but also the changed realities of global forest governance. Diplomacy provides us the context and the tools for global governance, including of sustainable development, and within that context of the world's forests. However, as with a host of other issues, the nature of the forest issue and its many complex inter-linkages to a whole host of other issues raises challenges for traditional practices of state diplomacy. At the same time, diplomacy itself has changed. Not only has the pace of international interaction increased on an increased number of issues, diplomatic 'actors' have themselves transformed. For example, diplomacy is no longer the domain only of Ministries of Foreign Affairs, experts from a whole host of specialized agencies within states, but also beyond states, are now involved in and often shape, international diplomacy. At the same time the current UN practice shows that by simplifying the problems at stake experts in a specific area, whether it would be forests, agriculture or climate changes, are dominating negotiations. They are not capable enough to link issues in order to find real solutions. At the other hand the diplomats have not enough understanding of the issues at hand to make a difference. In a globalized world, the nature as well as number of issues that require global diplomatic attention also increases. As the interests of states in the global system multiply, so does the need to manage the interactions between states. Technology and communication provide us with new tools for diplomatic interaction, but also make new demands on the craft as well as the substance of diplomacy. This reality of a complex issue and the dynamics of changing notions of diplomacy prompt the call for a 'new diplomacy' on global forests governance.[2] (Najam, Christopoulou and Moomaw, 2004).

➢ Finally, our third proposition is derived from our recognition that for a better understanding of the evolving system of global forest governance, or sustainable development diplomacy more broadly, the relationship between the parts must be studied, assuming that the relationships are mutual, emergent and dynamic (Teisman et.al., 2008). Such an integrated and evolutionary approach to governance increases our understanding of

[2] The term "new diplomacy" refers to the system of negotiation and governance of non-traditional diplomatic issues including international and global issues such as climate change, forests, biodiversity, fisheries, human rights and humanitarian intervention. These issues require domestic implementation, and involve a multiplicity of state and non-state actors.

this system and thereby reducing the risks of a reductionist approach. We acknowledge that our analysis of the evolving system of global forest governance is not sufficient, nor intended, to constitute a conclusive test of the hypotheses, as presented below, for the broader field of sustainable development diplomacy. Building upon the working assumption that the case study we have selected has been in place long enough to systematically analyze the critical determinants for the development of the system and its effectiveness, an inductive-deductive approach allows for the development and initial testing of a set of hypotheses which are distilled from the forest case study. In this, our principal findings in response to the research questions about the functioning of the system of global forest governance and its diplomacy are derived from the research presented in the first five chapters. Although the forest case study is sufficiently diverse to provide general preliminary insights into the various behavioral mechanisms for the field of sustainable development diplomacy as a whole, this case study must be seen as an intellectual springboard by which we attempt to trigger a line of analysis that could well result in the formulation of a research agenda for this newly emerging research field by probing the relevance of our hypotheses to actual behavior in related case studies within the broader field of sustainable development diplomacy.

In the context of these three overarching propositions and in response to the research questions presented in section 1.7, we have developed some initial hypotheses about the determinants of success in institutional bargaining and make use of these hypotheses, in a preliminary way, to illuminate the process of forming more effective governance systems for sustainable forest management. These hypotheses form the core of what a 'new diplomacy' might look like if it were to embrace the inherent complexity of global forest governance leading to enhanced governance capacity to deal effectively with complex problems. Within this framework, we will also elaborate on the three propositions themselves and why they are so central to changing the global response to forest governance. Building directly on the preceding discussion and in response to the overarching research question what we can learn about how the system of the diplomacy of global forest governance has evolved in order to achieve the internationally agreed goals, objectives and targets, we believe that there are at least six hypotheses that are central to devising a new approach, what we are calling the "new diplomacy for global forest governance" The points we raise here are especially pertinent in the context of forests, but they are not unique to the forest issue. Indeed, it is our contention that forests are not atypical at all. Instead, they are an exemplar of a new set of complex global problems (including, for example, climate change, global finance and food security) that are crying out for an alternative approach to diplomacy – one that embraces the complexity of the problem, is not state-centric, involves a multitude of stakeholders, operates differently at different policy scales, and seek an array of appropriate toolkits rather than single solutions. Following the third proposition, these working hypotheses also set the stage for the formation of an indicative research agenda for the emerging field of sustainable development diplomacy more broadly.

Our key arguments about why global forest governance is a particularly difficult challenge are already made in the previous chapters. The purpose of this concluding chapter is not to repeat these arguments, but to derive from them the determinants of

success of a new diplomacy for the global governance of forests in response to the research questions outlined in section 1.7. We will contextualize this analysis within the realities of the forests issue, but our central contention remains that these six key hypotheses are not limited to the forests issue per se. Indeed, the logic of the argument suggests that a new diplomacy on the forests issue is intrinsically interrelated to a new diplomacy on a whole host of other related issues (such as trade, agriculture, climate change, biodiversity).

In response to the interrelated focal areas encompassing the system of global forest governance, issues, actors and institutions and policy instrumentation (as introduced in section 1.7) and analyzed in the preceding chapters, we have distilled the main theoretical findings around scale and subsidiarity, issues and arenas, actors, negotiations, instruments and leadership. The attempt here is to draw out a key hypothesis on each and to integrate these into a cohesive set of connected ideas that steer us towards a new diplomacy for the global governance of forests. As indicated before, these hypotheses do not license any unqualified predictions about the functioning of the system of sustainable development diplomacy more broadly, but provide a testing ground and tentative research agenda for other case studies within this emerging field with a view to deepen and broaden our knowledge on this.

Hypothesis 1. Scale and Subsidiarity: Identification and attribution of the appropriate scale increases the probability of success of the system of global forest governance.

Based on the analysis in this study, we argue that global forest diplomacy has been too focused at the apex, or the global policy level, even when the issues of actual implementation are neither best understood nor best implemented at that level. From our case study we learned that UN headquarters discussions generally tend to operate in a particular logic of global inter-state politics. One where broad national interests define not just the language but also the substance of negotiations. One where issues get intertwined and subsumed within larger ongoing debates on delicate power dynamics, and one where national prestige and image can overwhelm the issue complexities and local realities that are triggered by those complexities. Forests and some forests stakeholders, particularly those with smaller voices, can often get subsumed in this operational logic. This logic of global negotiations is not just important, but central, to any international discourse. Our research showed that the practice of UN negotiations operates around long-established distinctions between "North" and "South", between G-8 and G-77, between "East" and "West", and so on. These are important and relevant distinctions, but the "Four Realities" framework presented in Chapter 4 provides a useful illustration of how interests around forests issues do not always divide around the obvious North-South or developing-developed lines that so often dominate UN discourse (Maini, 2003). The realities of forests in Suriname and Guyana are very different from those in Indonesia or India, but may be quite similar to those in Gabon or Brunei. Similarly, Norway, Russia and Canada may have far more in common than Canada and the United States when it comes to forests. For that matter, Canada and Indonesia may have some forests interests in common that

Canada and the United States may not. The distinction here is not just 'regional,' it is around forests-related interests. Our analysis showed that lumping countries and interests together in very large arrangements dilutes the issues resulting in suboptimal outcomes (Maini, 2004).

To increase the probability of success of the system of global forest governance, space needs also to be carved up for a more local discourse, for dealing with local and regional distinctions and nuances, and shared concerns and interests that do not cross normal global policy negotiation lines. It is important to note that our hypothesis does not imply to turn 'global' diplomacy into 'local' diplomacy. But it suggests that unless a space is carved out for accommodating and responding to the more local, domestic, and regional realities, the efficacy of the global thrust will be progressively diluted and could ultimately erode totally. No matter where global forest diplomacy takes place, the logic of UN negotiations needs to take into account the subsidiarity principle and should be tempered by a more regional logic that resides closer to where the forests themselves are and where common interests are shared. This implies that the global level should primarily focus on setting goals and targets, means of implementation, including financial resources and technology transfer.

The dominant structures of traditional diplomacy assume and insist that the metrics of broad international organization and discourse that have been derived from issues like international security, disarmament, or finance be imposed upon all international discussions. Our analysis identified that imposing these metrics on discussions of forests, where the nuances of substance as well as politics is quite different, leads to a system of global forest governance that is unlikely to be induce changes in the behavior of states and other actors whose behavior is directly involved in the relevant behavioral complex. As we examined in our study, the result to date has been policies and agreements that are not implemented and do not produce the results we are looking for in terms of changing the behavioral complex.

The recognition that not everything can be resolved from within the UN system implies two very important aspects in how a new model for global forest diplomacy might operate. First, it implies that while not all issues can be resolved from within the UN, some issues can – and, maybe, some issues can only be resolved from there. Secondly, it implies that a first step in the new global forest diplomacy should be to determine what the appropriate level of discourse and action is for which discussion; i.e., the principle of subsidiarity.

Indeed, there are aspects of global forest diplomacy for which apex-level negotiations are necessary. For example, the truly global aspects – in terms of aspects that require agreement or participation of literally all countries – can only operate at this level. However, many – and, maybe, most – implementation aspects require nuancing by region, by type of forests, by size of economy, etc. Such discussions may benefit from the realization that the discussion as well as the logic of the discussion needs to move to a locale closer to what is being discussed. Similarly, a global commitment to a shift from the traditional approach to forest governance to a new, portfolio approach needs the broad support and authority that the apex can bring, but the actual details of the

portfolio elements will need to be negotiated in a multitude of fora, some of which will be regional, some sectoral (e.g., financing, timber companies, indigenous peoples, etc.) and some focused on related issues (e.g., UNFCCC, IFIs, illegal taking and trade, etc.).

We suggest that further research is needed to identify an analytical framework that guides which issues should be discussed where. This requires, amongst others, designing and testing processes where different levels are able to interact. Such research could lead to important insights in how to give more meaningful voice and participation to more stakeholders and also make the diplomacy more effective. An important aspect of such a research agenda to identify and attribute the appropriate scale for a new model of global forest diplomacy is how to empower other venues and forums outside the UN system. As with the other hypotheses, research should gravitate towards examining overarching principles of determining which issues could best be addressed at which levels, locations and logics that are best suited to the issue itself. Following our model, we see the need for the development of a new global forest diplomacy that operates at multiple scales, with appropriate issues dealt with at the appropriate scales and with clear and functional processes for different scales to not only inform but also to negotiate with each other.

Hypothesis 2. Issues and Arenas: The development of institutional space for institutional interaction increases the probability of success of the evolving system of global forest governance.

Throughout this study we have demonstrated the notion that the 'system' of global forest diplomacy has been evolving with time. We have attempted to describe the dimensions of this evolution and argued that our inability to manage the emerging challenges of sustainable forest management is related to our inability to fully understand and keep up with this evolution and complexity. As a consequence, the tendency of decision-makers is to eliminate this complexity by defining narrow boundaries around these issues, such as forest carbon. This fragmentation among policies clearly affects the effectiveness in a negative way and is standing in the way of achieving the agreed goals, objectives and targets, as we have shown in the previous chapters. Based on our analysis, and following other scholarly work, we claim that the system of global forest governance has evolved into something far more complex than it was even until recently (Najam, Papa and Taiyab, 2006). Based on our findings we also believe that the evolution continues and is likely to continue.

For example, the system of global forest diplomacy is dramatically different from what it was until as recently as the 1992 Rio Earth Summit, where a global forest convention was discussed but only a non-binding declaration was achieved. It is different not simply because more countries are involved in the discussion today or because our understanding of forest challenges is more profound. The system of global forest diplomacy is substantially different today because the arenas where forests are discussed have also evolved. The shape of forest diplomacy today is determined not only by how the forests issue has evolved but also how interconnected issues – for example, climate change, biodiversity and trade – have and continue to evolve. These adjacent developments not only constrain how we can respond to the need of forests diplomacy,

they also open new opportunities.

In chapter 2, we traced the evolution of the system since the 1992 Earth Summit global forest diplomacy. We stressed that the system has evolved in a significant way with the establishment of UNFF, an international forum dedicated to forest discussions and a mandate to bring multiple actors together. This makes any discussion on global forest governance substantively and qualitatively different from deliberations that took place before the UNFF was created. The institutional pulls, the political demands of turf and influence, the negotiation space, the discourse memory, are all different because there is now such an arena.

Based on our analysis we do not claim that this is the only – or even the most fundamental – difference today. The evolution of the global forest diplomacy system between 1992 and now is far deeper than just the creation of the UNFF. Indeed, it could be argued that in terms of substance far more important developments in this system evolution have happened in arenas that are not primarily focused on forests. For example, the evolution of the global climate change debate and its focus on forests as carbon sinks has created new spaces for forest diplomacy that are not entirely within traditional forests arenas. Indeed, given the growing focus and importance of climate change has also led to an increasing focus on forests within climate discussions and also on climate within forests discussions (IWG, 2009). From a policy aspect this has once again generated global interest in the forest issue, on the other hand there is a risk that a whole host of other (non-climate-related) forest concerns may be ignored or disregarded as climate change and carbon sequestration become the most important drivers of forest policy (TDF, 2008). Importantly, this, we argue, is much more likely to happen – or not happen – in climate change arenas and institutions than in forest arenas and institutions.

Also the growing attention to increasing the development of agriculture in order to fight poverty has a direct link to global forest governance. Only as we are capable of intensifying agriculture on current agricultural land we can overcome further deforestation. So the system of global forest governance as well its diplomacy has to give due respect to these inter-linkages.

Another important example of the system evolvement is that of illegal trade in forest products, particularly timber. This is clearly a critical challenge for the global governance of forest resources. However, trade decisions are made at the World Trade Organization (WTO), which also has both the mandate and ability to enforce its decisions. Yet at the present time WTO largely ignores the issue of trade in timber that is harvested in violation of international norms or even national laws, and could even oppose actions taken to address this problem if they violated trade rules (Brack, 2003; Trachtman, 2009).

While the above are primarily state-based examples, the development and growth of independent labeling mechanisms demonstrates that the system has begun to co-evolve to incorporate and create a space for non-state actors too. For example, the FSC has demonstrated the utility of labeling that has itself changed the debate on the subject and made many of the arguments being made in 1992 redundant. Similarly, with our study

we find that REDD as a concept has demonstrate how closely linked issues – such as climate change and indigenous peoples' rights – could possibly be linked in policy, just as the Growing Forests Partnership is beginning to demonstrate the possibilities and challenges of multi-institutional partnerships and linking global and local agendas. In essence, our study learned that the system has evolved in multiple dimensions and well beyond 'traditional' or 'focused' forests institutions. There is also a recognition of this evolution and some attempts to incorporate multiple actors for example in Congo Basin Forest Partnership, the Asia Forest Partnership, and the Model Forest Network in Latin America and the Caribbean.

Our study also highlighted that the proliferation of arenas where forest governance is being discussed, which is also part of this non-linear evolution, could itself lead to significant management problems. While multiple arenas do provide the ability to deal with different levels of the complexity at different forums, they also require a system of inter-arena coordination. The need for such coordination in global forests governance is now becoming glaringly, and urgently, evident. This need is further underscored by two related realities. First, that more and more non-forest actors will impact forests decisions (TFD, 2008). Secondly, that more and more forests decisions will be made in non-forests forums (Hoogeveen et.al., 2008). It says also something about the negotiators who should be capable of acting in these multiple arenas. They should have a broader understanding and knowledge about issues involved as well as the sills to act in a more integrated way. Creating the space for such institutional interactions and developing a more integrated diplomacy are key challenges in creating a new diplomacy for global forest governance.

It is important to note that our hypothesis does not imply to create management super-structures within which all the myriad initiatives are subsumed. Our research shows that a new diplomacy for global forest governance would require a more flexible institutional space where different institutions can network with each other without trigger 'turf' sensitivities of the key actors. Our study highlighted that some of this institutional networking is beginning to take shape as relevant actors start interacting with the forums of other relevant actors. More than this, however, is the need for a network arrangement whose primary role is facilitating inter-institutional coordination. Further research, we claim, is needed on the particular modalities of such an arrangement.

As a common theme we have reiterated that because forests have multiple issue dimensions, there are multiple arenas where different issue aspects are discussed and dealt with. This means that institutions and arenas dealing with agriculture, international trade, climate change, poverty and development, and biodiversity all have legitimate reasons to be making forest decisions and, conversely, forest institutions have legitimate reasons to be discussing all these varied issues. This, as we demonstrated in our work, obviously makes forest decision-making that much more complex. But it also offers the possibility of different arenas being able to manage different issues aspects. Our findings indicate that any effort to 'manage' all these myriad issues within a single institutional framework will lead to a system that diminishes the probability of success

in terms of developing an effective system of global forest governance. An alternative model would focus on a governance system that can create enough coherence, interaction, and coordination between the various arenas that they all act towards a common goal – i.e., sustainable forest management or, more broadly, sustainable development – rather than at cross purposes. The need, therefore, is not for a 'super-arena' but, instead, for better coherence. This assumes, indeed it necessitates, an institutional actor whose role is to facilitate such coherence.

Based on our analysis we argue that the most effective institutional body to provide this system synergy would be the UNFF. The Forum is already the de facto convening place of all policy discussions related to the world's forests. The UNFF can be the space where the system seeks to develop a common guidance on which direction the system moves and how different parts of the forests governance system interact. This would mean, however, that UNFF moves from trying to act like a negotiation forum to become a management forum. Our proposition is to make this convening function the UNFF's primary responsibility and providing it with the tools and incentives through which to succeed in this task. The metrics of success of UNFF, we claim, would not be measured by what 'agreements' it reaches, but instead by the space it can provide to all relevant forests policy actors to interact and synergize their activities. Such a role envisages the UNFF as the central hub in coordinating the 'portfolio' of forest policy initiatives by multiple actors. It becomes the space within lessons across various initiatives are shared, ideas are jointly developed, institutional linkages are fostered, and a tabulation is kept of which initiatives within the portfolio are doing better or worse and, as a result, how the portfolio as a whole is performing; i.e., whether the state of global forest governance and our world's forests themselves is improving.

It seems to us as important to do more thorough research on how to develop institutional space more consciously, instead of accidently, that allows for a more adaptive and explorative strategy to manage complex governance challenges in which interconnected issues, networks of actors and multiple instruments play a more dominant role.

Hypothesis 3. Actors: The probability of success of the system of global forest governance increases when deeper participation of all relevant stakeholders is ensured.

In previous chapters we have demonstrate the variety of actors involved in global forest governance, but also highlighted the complications that arise because of the variety and how those implications impact the efficacy of global forest governance. From our case study we learned there is no fixed content, nor is there a fixed set of actors operating within the system of global forest governance. There is nearly full consensus amongst scholars as well as practitioners of global governance on the need to incorporate a broader array of actors and their wider range of interests for more effective global governance (Young, 1994). Much scholarly work demonstrates that governance capacity is generated through the coordination of the activities of these actors (Child and Faulkner, 1998). Discussions couched in the language of 'multi-stakeholder involvement', 'broad participation,' 'public-private partnerships,' etc., all emanate from

the realization that meaningful global action requires more than the participation of states. States are no less important today than they were in the past, but they are no longer the only actor group that influence global challenges (Najam et.al., 2004)

In support of a polycentric approach, chapter 4 presented a detailed picture of the complex landscape of global forest actors, from state, market, and civil society actors. As we analyzed there, the system of global forest governance, particularly regarding multilateral negotiations, however, remains state-centric even as global realities are no longer so. While there are some exceptions – for example, the active involvement of NGOs such as IUCN, WWF and TRAFFIC in biodiversity-related MEAs – these still remain exceptions rather than the rule. Our analysis learned that the forces of inertia within a state-centric system are difficult to change for both state-actors and non-state actors.

As we have learned in many international negotiation settings – from climate change to trade – the most common role for non-state actors is to provide 'observer' status to some non-state actors, maybe an opportunity to speak within a plenary session, and most often the ability to lobby state delegates in the corridors. In essence, the multilateral system is willing to allow new actors in, but only at its own terms and is much less ready to change itself to facilitate their effective participation.

For a global forest governance system to become more effective we assert that we need new and innovative ways of thinking about what 'participation' in global forest governance really means for different actors. Based on our findings a new diplomacy for improved global forest governance must begin to rearrange the notion of 'stakeholder participation' itself. For example, the process for certifying forests products through independent third parties such as the FSC, as a response to facilitate complex decision-making, involves meaningful exchange between actors at very different parts of the supply chain. For the system to work, local timber producers in tropical forests must be able to communicate effectively with their counterparts in consumer countries, both of whom must react to ever changing market and environmental dynamics. As a result, independent certification programs can only be successful if they integrate the concerns and wisdom of those working on both ends of the forests products spectrum. As Chapter 4 has detailed at some length, there are a multitude of actors with very different interests in the forest issue: from forests users seeking ways to sustain their livelihoods, to business representatives seeking market opportunities, to states implementing their sovereign prerogative to the management of their resources. All these interests are valid and important for the actors concerned. There are strong practical and conceptual – even moral – reasons to want to involve all of them in the governance of the world's forests. But there is no reason - practical, conceptual, or moral - to assume that this means having to bring them all together in every global forum to ensure an effective system of global forest governance.

The example of indigenous peoples and local communities is illustrative in that regard. Their survival concerns and interests are not just important but central to sustainable forest management (Kaimowitz, 2008). Yet there is concern that forest approaches, such as REDD, may be setting processes in place to maximize a benefit such as carbon

sequestration at the expense of the needs of the populations living in the forests. It is also clear that these concerns need to be central to discussions at global institutions and in global negotiations. What is not clear, however, is whether and how these concerns can be best represented and accommodated in global decision-making. An important research question for further work is how and at what point it is most useful to include these voices: at the global negotiation table, in bilateral or smaller-group conversations, at the national policy level or locally on the ground.

Based on our findings of the current practice, it seems that the level at which they have the least capacity to provide insight and influence – at the global level - is where they are mostly incorporated, but the level at which they can provide the most insight and influence – the local level - is where they are mostly ignored.

A critical determinant for success, we believe, is to invest in a new diplomacy for global forest governance that allows multiple opportunities for multiple actors. This dovetails directly to the need for a portfolio approach as we articulate in the hypothesis below. Building on what we learned from other fora – such as the involvement of private sector actors in negotiations to regulate CFC production and the Montreal Protocol, the incorporation of civil society actors in the Desertification Convention, the experience of NGOs with tracking illegal trade in endangered species, the important role played by celebrities in raising global awareness on human rights issues, or the contribution of scientists in clarifying the state of science in climate change policy – the notion is to provide different actors the ability to be involved at the levels where they have the most competence and capacity to influence global forest governance.

Our proposition is not to exclude some actors from global diplomacy. At the same time, our analysis shows that we should depart from the widely shared notion that "all relevant stakeholders" should be involved. Rather, it is to expand our understanding of what participation in global governance means to include all the levels at which the implementation of global forest governance practically happens. Our approach is to expand not only the number of actors that are involved in global forest governance but also to expand the range of opportunities in which they can be meaningfully involved. At the same time, it is critically important to be selective in determining which actors should be involved. Those actors who have a critical role and the governance capacity in the implementation of the global outcomes should have seat at the table. For an effective system of global forest governance, our case study finds, as one illustration, that it is less relevant to debate who speaks for forest dwellers globally, than to hear what forest dwellers are saying about their own forests. We propose that future scholarly work needs to be conducted to develop an analytical framework to ensure that all relevant voices are not only given a chance to "say" what they think, but that what they are saying is actually "heard" by those who can most react most relevantly to what they are saying.

The interconnected nature of today's challenges resulted in suggestions for a coordinated response by a more coherent governance system. Coherence requires reasonable coordination and regular communication among organizations. However, it does not require a super-organization, nor does it require a central control mechanism

to coordinate every action of every organization in the international system. Better policy coherence requires horizontal integration of global forest governance. First, our analysis indicates that there should be a commitment to deal with new issues in the most appropriate existing forums, rather than creating new instruments and institutions. Second, the current practice shows that each of the involved institutions has its own forest pogram. This leads to a proliferations of forest programs which are partly overlapping and all have a lacks of means of implementation. Drivers for the programs are to a certain extent the secretariats of the institutions in order to give profile to its institution. Often it leads to competition and turf wars within the UN system. This clearly shows the need for clustering or merging of secretariats of MEAs and departments of UN organizations and the forest arena should be encouraged to follow suit.

Hypothesis 4. Policy instrumentation: The fixation with one comprehensive agreement distracts attention from other avenues of the diplomacy of global forest governance that have a better potential for resolution and for implementation.

The multiplicity of issues and actors related to forests has led to a myriad governance mechanisms and diverse approaches to the implementation and enforcement of sustainable forest management. In previous chapters we analyzed the complex sets of instruments and approaches within the system of global forest governance and have shown that this interactions bring the achievement of our agreed goals, objectives and targets not nearer. It clearly impacts the effectiveness of the systems and its efficiency. More than ever the question arises around the effective scale of the governance response, including the role and impact of the subsidiarity principle.

Among decision-makers there is an ongoing tendency towards creating stability and order in governance systems. Based on our research it is not a surprise that for nearly two decades now the international discourse on global forest management has been fixated on the desire to negotiate an all-encompassing forests agreement of some sort. The fixation on a single solution – be it a framework convention or a global forest fund – has concentrated the attention on the process of negotiation, even when many commentators and practitioners alike have stated that it is unlikely that a meaningful single instrument can be negotiated (Humphreys, 2006). In the process, other global governance options for forests have either been ignored, or have received less attention than they deserved.

As we learned, global governance is a highly interlinked and complex system that is the sum of organizations, policy instruments, financing mechanisms, rules, procedures, and norms that regulate the processes of forest specifically, within the broader context of sustainable development, operating at multiple levels: global, national, and local. The confusion between ‘negotiation’ and ‘governance’ is not unique to the forests issue. Many issues related to sustainable development, including climate change and biodiversity, have been plagued by a similar confusion. But this confusion has been particularly pertinent in the forests context because the negotiation process has consumed so much time and effort and yet yielded so little.

The late 1980s and early 1990s marked the era of global negotiations. The emergence of new challenges, the end of the cold war, the headiness of globalization, and a newfound technical ability to scale-up the number, size and frequency of global gatherings triggered a certain infatuation with global negotiations. Existing negotiation processes heated up (for example, on trade) and a whole host of new negotiation processes were launched (for example, on environmental issues) at ever more ambitious scales in terms of participation, scope and aspiration. Nowhere was the sense of possibility of global negotiations on display with as much enthusiasm as at the 1992 Rio Earth Summit, including in its initial attempt to negotiate a Global Forest Convention.

At that point, this singular focus on the negotiation process was not just necessary, but desirable. Many of the issues were new, or new complexities had been added because of fast-changing global realities. Getting countries together to set common goals and seek common solutions made full sense to the parties involved (Susskind, 1994). However, in this process, a negotiation system took hold where negotiation itself seems to have become the goal (Najam, Papa, Taiyab, 2006; Munoz et.al., 2009). The system, as a result, has often lost sight of the fact that an agreement itself is not the measure of 'success' – and, certainly, the sheer act of negotiation is not. Negotiation success can particularly be measured by the successful implementation of that which is negotiated and, ultimately, the impact that implementation has on the problem that first brought the negotiators together (Young, 1994). The pervading sense of 'negotiation fatigue' (Munoz, Thrasher, Najam, 2009), analyzed in Chapter 2, that so many commentators lament is itself a direct result of growing aggravation about the years of unending negotiations that do not lead to any concrete implementation, and in the case of forests not even a functional agreement.

In the case of forests, the negotiation fatigue has become particularly intense and the assumption that every meeting must negotiate some 'common text' is overwhelming, even when the text has neither legal validity nor demonstrated implementation utility. The mechanics of negotiation seem to have become rather ritualistic (Humphreys, 2006). Very different actors – foresters, diplomats, environmentalists, indigenous peoples – tend to come in with very different expectations, speak very different policy languages, and leave with a common sense of dissatisfaction. But most importantly, whatever is negotiated tends to have minimal impact on the actual state of the world's forests.

Much of this results from the fact that the search for one universal, comprehensive convention have never really been given up. Based on our study there are at least three related reasons why, in the context of global forest governance, we think that a single, universal "Global Forest Convention," per se, is not a critical determinant for success in terms of providing an effective system for global forest governance.

➢ First, from a practical perspective, it is clear – and has been for quite some time – that the political will and motivation for such a convention simply does not exist.

➢ Second, from a strategic perspective, the recurring rituals of discussing ideas about grand solutions like a comprehensive forest convention are not just an nuisance but an

actual drag on the time and resources of those involved in global negotiations. The fixation with a single agreement distracts attention from other avenues of global forest management that have a better potential for resolution and for implementation.

➢ Finally, from a conceptual perspective, it is no longer clear that a global forest convention (or a single fund) would be an effective tool, even if it were politically possible to attain agreement. The complexity of the issue and the myriad linkages to other challenging issues – for example, trade, climate, settlements, etc. – militate against a single treaty solution and calls for a more nuanced set of cross-linkages with other issues and the conventions and treaties that govern them.

In essence, working towards an all-encompassing Global Forest Convention could lead to suboptimal outcomes in three ways – (a) it is an institutional bargaining process that is unlikely to conclude; (b) keeping engaged in such a bargaining process distracts the international community from other, more feasible, achievements, and (c) the international community may find itself saddled with even bigger problems if such a convention were indeed to be concluded and adopted.

Based on the evidence in our study we have no reason to denounce the act of forest negotiations per se. Many scholars have pointed to the realization that particularly integrative bargaining have a potential to resolve issues at the multilateral level (Young, 1994).The lesson, however, is that we now know much more about forest issues and also about the process of negotiation. Our analysis shows that the international community need to build a response to the complexity of the issue that embraces that complexity and utilizes it to solve multiple problems. In forest issues, as on many other complex sustainable development issues, soft law has tended to produce hard results (Hoogeveen et.al., 2008). We claim that the fixation with searching for hard law solutions needs to be nuanced with a recognition that an array of soft law instruments might be more effective to a single comprehensive hard law instrument. Forests, as our analysis have demonstrated, are not about a single issue, they involve multiple issues for multiple actors at multiple political levels and geographical locations. They require, therefore, not a single response, but a series of connected responses – i.e., a portfolio of responses.

Hypothesis 5. Policy instrumentation: Portfolio Approach – The probability of success of the system of global forest governance rises when a portfolio approach is adopted.

Our study began with the premise that the purpose of global efforts is not simply to get an 'agreement,' but to stimulate actual improvements in the state of forests, to sustain the services they provide, and to enhance the quality of lives of those who depend on them. From nearly 20 years of accumulated experience in trying to negotiate a 'treaty,' we now know that an overarching agreement that does all of the above is unlikely, but we also know that there are many specific initiatives and steps that can be taken to move us towards these goals (Hoogeveen et.al. 2008). Based on our analysis, the system of global forest governance will be more effective when it develops mechanisms that nurture, support, connect and coordinate global efforts. The challenge is not one of negotiating a new grand instrument, but of coordinating multiple existing and new

initiatives. Such an approach will need to include innovative and sometimes untried mechanisms. As Chapter 5 illustrates, there are multiple tools and approaches – mostly soft law instruments – available for global forest governance, which will require new modes of operating with multiple stakeholders. It will also require adaptive governance in order to be flexible to adjust to our ever changing world, including new actors, contexts, and challenges (Boons et.al., 2008). To be effective, it must be performance based, requiring rigorous and constant assessment, and strong mechanisms of coordination and coherence between multiple instruments and institutions.

Based on our earlier research, such a 'Portfolio Approach' could consist of utilizing a combination of initiatives that can raise a variety of resources – including, monetary resources, knowledge resources, capacity development, public support, and awareness– for effective global action on forests (Hoogeveen et.al., 2008). Simply stated, the notion of a Portfolio Approach is that instead of selecting a single (or small) set of instruments, a portfolio of complimentary instruments be nurtured for raising the required support mechanisms (Hoogeveen et.al, 2008).

Indeed, in our study we have demonstrated that such a portfolio has, de facto, begun to emerge. Between, independent third party forest certification, a REDD initiative within global climate negotiations, the convening power of UNFF, collaborative partnerships such as the Congo Basin Forest Partnership, national forest reserves, sustainable working forests and the Global Biosphere protected areas, Costa Rica's payment for ecosystem services program, FLEG, and others the reality of global forest policy is already beginning to be defined by a portfolio approach. However, in the absence of a formal recognition of this reality and of a governance system that seeks to 'balance' and coordinate this portfolio of initiatives, there is the risk of redundancy, friction, and incoherence contributing to an ineffective system of global forest governance.

An important element of a future research and policy agenda in the field of global forest governance would be to carefully study, organize and coordinate the management of the myriad initiatives and instruments that have sprung up, and the sum of which constitute global policy on forests. These may include forest specific initiatives and instruments, such as forest products certification, national policies or MEAs, or these may also include initiatives and instruments in other 'linked' sectors, such as carbon trading or WTO trade agreements. Once a full inventory is compiled and an analysis of possible interlinkages has been conducted, the policy challenge is to begin organizing the list for coherence and developing formal linkages between them for effectiveness. With participation from diverse forests actors, like those described in Chapter 4, such a policy response would lead to the identification of areas of duplication, areas of policy neglect, areas in need of additional initiative, and areas in need of bolstering.

From a diplomacy perspective, such a portfolio approach has the potential to unlock one of the most difficult problems in multilateral negotiations leading to suboptimal outcomes. The negotiation process can become difficult when single (or small sets of) issues have to be negotiated by a large number of actors, many of whom have only limited interest in that particular issue (Susskind, 1994). Often the result is 'deadlock' because each issue negotiation gets bogged down by the inability of actors to 'trade

across issues' and the absence of a framework that allows for concessions on different issues to be traded. A well-conceived portfolio negotiation would make explicit the fact that concessions on different aspects of the portfolio can be traded. The portfolio of options provides regionally and developmentally appropriate means for different nations and regions to meet overarching agreed upon goals. It could also seek more efficiency in the negotiation since not all actors will need to participate equally in every aspect of the portfolio. Differing regional approaches can also be better accommodated within such an approach. This, however, can only happen if all actors are convinced that their priority issues are, in fact, being dealt with in some other part of the portfolio and an assurance that the overall portfolio will remain 'balanced'.

By way of an example of what the portfolio approach might look like, we previously conducted research based on which we prepared a detailed proposal for global forest financing (Hoogeveen et.al., 2008). We concluded that the major problem was obtaining financial resources at sufficient scale, and that a major barrier to obtaining an agreement for a forest instrument was over a lack of willingness of donors to make funds available and an inability to agree on control and decision making for the fund. As an alternative, the Forest Financing Mechanism (FFM) we developed envisaged in the proposal consisted of four major financial product and service 'types' including: public funding; payment for ecosystem services; engaging the private sector; and mobilizing philanthropic leaders. The idea was based on the premise that individually, neither the public sector, the private sector, nor civil society can mobilize sufficient resources for effective global forests management. However, a combination of products and services from the four elements of the portfolio – public funding, payment for ecosystem services, engaging the private sector, and mobilizing philanthropic leaders – could possibly provide a win-win, mutual gains solution to sustainable global forest financing (Hoogeveen et.al, 2008). This is not simply a matter to collating the potential of different actors. To be successful, such a portfolio approach requires the ability to identify, and facilitate, the appropriate mix of instruments and to provide a governance framework within which each instrument can achieve its potential. The challenge for forest diplomacy is to create global negotiating platforms where such a governance system can first be devised and then operationalized (Jenkins et.al., 2007).

As already indicated, based on our research a new model for the diplomacy for global forest governance moves from trying to negotiate grand agreements to negotiating – and then managing – a portfolio of instruments within an ecosystem of institutions and actors. Not all of the institutions and instruments in this architecture would be state-centered. In our study we have demonstrated that market instruments and civil society institutions are as central to the good governance of our world's forests as state institutions. Indeed, such market and civil society instruments – including independent third party certification, possibly REDD – are already important components of the emergent forest governance 'portfolio.' But they are so, we learned, by happenstance, rather than by design. Following our model, a new global diplomacy for forest governance, would make the portfolio approach explicit. More than that, the goal of this diplomacy would move from the negotiation of a treaty or agreement, to the creation and management of portfolios of instruments and the provision of the

convening space in which they can operate and be nurtured coherently. The inseparability of the social and environmental dimension from the economic ones requires a comprehensive approach. The relationship of forests to water, climate, livelihoods, trade, biodiversity, timber and non-timber resources and to land use must be understood and the interconnections among these subsystems utilized in devising strategies that may affect them all. The traditional structure of treaties treats each of these subsystem issue areas singly so that attempts to optimize for each issue subsystem leads to sub-optimization of the total system. Hence, we fail to address forests effectively because we do not include the full range of economic, human and environmental dimensions. Sustainable Development Diplomacy will be more effective once it recognizes this fundamental fact.

Hypothesis 6. Leadership: A system of global forest governance cannot succeed in the absence of effective entrepreneurial leadership on the part of individuals.

Our final hypothesis centers around the notion of personal leadership and its impact on the system of global forest governance. Although the actors discussed in chapter 4 primarily revolved around broad categories: governments, international organizations, civil society and the private sector, we also assume a critical role on the part of individuals in promoting a more effective system of global forest governance. This is not to claim that these overarching categories are irrelevant.

Based on the evidence from our analysis we claim that a critical factor to develop an effective system of global forest governance is the emergence of one or more individuals as effective leaders in the process and, conversely, that in the absence of such leadership, they will fail. Especially in the twenty-first century leadership is needed that recognizes the complexity of interconnected issues. He, or she, is expected to be an honest broker, a respected leader who can propose new ideas and bold action for the rapidly changing international governance system and at the same time work – sometimes publicly, sometimes behind the scenes – towards finding solutions to unprecedented problems and challenges that human mankind will face in the coming years and decades. In our experience we do not just refer to political leadership, but also to those who in the daily negotiations within the UN system can and are willing to show leadership. The complexity of the system not only asks for change in how we operate, but also a change in skills to make the system more effective.

This is not unique for the forest case study per se. Much scholarly work has underscored the importance of effective leadership in global public goods arrangements (Frohlich, 1971). A particularly striking, and widely cited, case is the remarkable achievement of Mostafa Tolba, UNEP's executive director, in shepherding the negotiations regarding the protection of stratospheric ozone to a successful conclusion. Leaders in institutional bargaining are neither representatives of hegemons who can impose their will on others nor ethically motivated actors who seek to fashion workable institutional arrangements as contributions to the common good or the supply of public goods in international society (Young, 1994). Our analysis shows that a critical success factor in changing behavioral impact is the leadership and vision that is required to build and implement

a new diplomacy. It requires boldness to experiment with new ideas, such as those illustrated in previous chapters revolving around the introduction of the portfolio approach in the context of UNFF.

Another critical component for leadership to facilitate effective decision-making within complex governance system is the level of trust vested by other actors, such as governments and major groups. If horizontal relations in governance systems are increasing in importance, trust becomes an important coordination mechanism since uncertainties can no longer be managed through hierarchical power (Edelenbos and Eshuis, 2008: 195). An important condition for any decision-maker, such as a Chairperson in multilateral negotiations, to become effective is to gain a sufficient level of trust necessary for the generation of a system's governance capacity which is competence based. This competence based trust involves trusting the ability of an actor to make things work thereby reducing the perceived chance of opportunistic behavior by other actors (Das and Teng, 2001).

Effective leadership also requires a truly global and inclusive mindset to turn around the notions of traditional diplomacy on its head building upon the recognition that the complexity of our evolving and polycentric governance systems is here to stay. In this, the leadership required has to be bold and innovative enough because the long-term challenges of sustainable development are big enough.

As we conclude our thesis, it is clear that the traditional tools of diplomacy that we have applied and the system of governance we have tried to construct around the forest issue has not worked. It is not that the actors who have tried to solve the problem have not worked hard enough, nor that they have not come up with good ideas. It is, instead, that traditional tools of diplomacy that they have been applying ever so diligently are no longer the appropriate tools.

In our study we have tried to outline the overarching propositions of what we believe are the essential determinants of success of a new diplomacy for the global governance of forests. We envisage a diplomacy that is build around the premise that the complexity of the solutions has to match the complexity of the problem and that the inherent complexity of the forests problem has to be recognized an incorporated into any governance mechanism that is established.

During our study we have learned that there are many signs that a de facto new diplomacy is already beginning to emerge. Complex connections are beginning to be made. Innovations around actors and participation are being experimented with. Non-traditional instruments are emerging and the seeds of a portfolio approach have already been sowed. However, we recognize that all major systems are inherently resistant to change while forces of inertia seek to keep systems moving along familiar paths. As we have learned, the established system seeks to resist and reject attempts at change. Our research indicated the profound challenges of the current system of global forest diplomacy system while at the same time highlighted many experiments and efforts that are, in fact, moving in the right direction in terms of increasing the probability of successful implementation.

To the extent that the arguments sets forth in this study are convincing it should be

apparent that we need to devote much more attention in the future to exploring the nature of sustainable development diplomacy. Although efforts have gone into the effectiveness of subcomponents of the system of global governance, or more precisely global forest governance, our understanding of the determinants of success of the effectiveness of the system as a whole is rudimentary at this stage. Nonetheless, the effort to improve knowledge of this complex subject is essential for those responsible for designing governance systems to cope with sustainable development challenges.

We hope that our study of this particular case study provided a useful first step as a platform for future scholarly work on the effectiveness of sustainable development diplomacy.

References

Agarwal, Anil, Sunita Narain, Anju Sharma, and Achila Imchen. 2001. Poles apart. Global Environmental Negotiations 2: 441.

Agrawal, Arun, Ashwini Chhatre, and Rebecca Hardin. 2008. Changing governance of the world's forests. Science 320, no. 5882: 1460-1462.

Applegate, G., R. Smith, J.J. Fox, A. Mitchell, D. Paccкham, N. Tapper, G. Baines. 2002. Forest fires in Indonesia: Impacts and solutions. In Which way forward? People, forests, and policymaking in Indonesia, ed. C.J.P. Colfer and I.A.P. Resosudarmo, 293-308. Washington, DC: Resource for the Future.

Arnold, J.E.M., and Bird, P. 1999. Forests and the poverty-environment nexus. Prepared for the UNDP/EC Expert Workshop on Poverty and the Environment by PROFOR Program on Forests, World Bank. Brussels, Belgium.

Arts, Bas, and Marleen Buizer. 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. Forest Policy and Economics, vol 11: 340-347.

Arts, Bas. 2008. Global governance, NGOs and the politics of scale. In: Tales of Development; People, Power and Space. Assen: Van Gorcum.

Asadi, B. 2008. International forest deliberations, processes and civil society: an historical account (1992-2007). International Forestry Review 10, no. 4: 657-669.

Bailey, Robert C., Serge Bahuchet, and Barry Hewlett. 1992. Development in the Central African rainforest: concern for forest peoples. In: Conservation of West and Central African Rainforests, ed. Kevin Cleaver, Mohan Munasinghe, Mary Dyson, Nicolas Egli, Axel Peuker, and Francois Wencelius, 202-211. Washington, D.C.: World Bank.

Banuri, Tarik and Adil Najam. 2002. Civic Entrepreneurship: A Civil Society Perspective on Sustainable Development. Islamabad, Pakistan: Gandhara Academic Press.

Barber, Charles Victor, and James Schweithelm. 2000. Trial by fire: Forest fires and forestry policy in Indonesia's era of crisis and reform. Washington, DC: World Resources Institute.

Bhargava, Vinay. 2006. Introduction to global issues. In Global issues for global citizens: An introduction to key development challenges, ed. Bhargava, Vinay K. Washington, DC: The World Bank.

Blaser, Jurgen, and Carmenza Robledo. 2008. Not for timber alone – the role of forests in climate change: A comprehensive overview. Climate Investment Funds, First Design of the Forest Investment Program. Washington, D.C.: World Bank.

Bloomgarden, E. and M. Trexler. 2008. Another Look at Additionality, in: Environmental Finance magazine. May 2008.

Boecher, Michael et.al., 2007. Environmental and Forest Governance: The Role of Discourse and Expertise. Conference Paper: Goettingen, 2007.

Bonan, G. 2008. Forests and Climate Change: Forcings, Feedbacks, and the Climate Benefits of Forests. In: Science, 320: 1444-1449.

Boons, Frank et.al. 2008. Towards and Approach of Evolutionary Public Management. In Managing Complex Systems: Dynamics, Self-Organization and Coevolution in Public Investments. London: Routledge.

Botkin, Daniel and Lee Talbot. 1992. Biological Diversity and Forests. In Managing the World's Forests: Looking For Balance Between Conservation and Development. Iowa: Kendall Publishing Company.

Boyd, Emily, Esteve Corbera, and Manuel Estrada. 2008. UNFCCC negotiations (pre-Kyoto to COP-9): What the process says about the politics of CDM-sinks. International Environmental Agreements: Politics, Law and Economics 8, 95–112.

Brack, Duncan. 2003. "WTO Implications of an International Timber Licensing Scheme" Sustainable Development Programme Royal Institute of International Affairs London, UK.

British Columbia Ministry of Forests and Range. Beetle Facts. Available from www.for.gov.bc.ca/hfp/mountain_pine_beetle/facts.htm#factors.

Carbon Conservation. Aceh green: Ulu masen community climate biodiverse voluntary carbon credits. Available from http://www.carbonconservation.com/#whatsnew.

Carter, Claire, Willa Finley, James Fry, David Jackson, and Lynn Willis. 2007. Palm oil markets and future supply. European Journal of Lipid Science and Technology 109, no. 4: 307-314.

Cashore, Benjamin. 2002. Legitimacy and the Privatization of Environmental Governance: How Non-State Market Driven Governance gain Rule-Making Authority. In Governance: An International Journal of policy, Administration and Institutions 15(4): 503-529.

CBFP (Congo Basin Forest Partnership). 2008. Draft background note: Colloquium working in partnership – sustainable management of the Congo Basin. Washington, DC: Congo Basin Forest Partnership.

Cerulli, Tovar. 2009. "Certification Comes to Family Forests" Northern Woodlands pp. 26-32.

Chan, Sander and Philipp Pattberg. 2008. Private Rule-Making and the Politics of Accountability: Analyzing Global Forest Governance. Global environmental politics (8)3:103-121.

Chasek, Pamela S., David L. Downie, and Janet Welsh Brown. 2006. Global environmental politics. U.S.: Westview Press.

Chester, Charles, and William Moomaw. 2008. A taxonomy of collaborative governance: A guide to understanding the diversity of international and domestic conservation accords. International Environmental Agreements vol. 8. pp. 187-206.

Chomitz, Kenneth M. 2007. At loggerheads? Agricultural expansion, poverty reduction, and environment in the tropical forests. Washington, DC: The World Bank.

Christy, Lawrence, Charles Di Leva, Jonathan Lindsay, and Patricia Talla Takoukam. 2007. Forest Law and Sustainable Development. Washington, D.C.: The World Bank.

CIFOR. 2008. Foundations for Effectiveness. Policy Brief December 2008. Bogor: CIFOR.

Colchester, Marcus. 2008. Beyond tenure: Rights-based approaches to peoples and forests: Some lessons from the Forest Peoples Programme. Washington, D.C.: Rights and Resources Initiative.

Colfer, Carol J. Pierce, Douglas Sheil, and Misa Kishi. 2006. Forests and human health: Assessing the evidence. CIFOR Occasional Paper No. 45. Bogor, Indonesia: Center for International Forest Research.

Collaborative Partnership on Forests (CPF). 2008. Strategic Framework for Forests and Climate Change: a CPF proposal. Rome: FAO.

CONAFOR (Comisión Nacional Forestal). 2007. Distribución de recursos de Proarbol en 2007. Zapopan, Mexico: CONAFOR. Available from: http://www.conafor.gob.mx/portal/docs/secciones/comunicacion/B-1042007.pdf.

Conca, Ken, and Geoffrey D. Dabelko. 2004. Green planet blues: Environmental Politics from Stockholm to Johannesburg. U.S.: Westview Press.

Conservation International. Lost there, felt here. Video. Arlington, VA: Conservation International.

Conservation International. 2007. Annual report. Arlington, VA: Conservation International.

Constanza, Robert et.al. 1997. The Value of the world's ecosystem services and natural capital. In: Nature 387: 253-260.

Cotula, L., S. Vermeulen, R. Leonard, and J. Keeley. 2009. Land Grab or Development Opportunity? Agricultural investment and international land deals in Africa. London/Rome: IIED/FAO/IFAD.

Critical Ecosystem Partnership Fund. 2007. Annual report: Protecting nature's hotspots for people and prosperity. Washington, DC: Critical Ecosystem Partnership Fund.

Cunningham, A. 1993. African Medicinal Plants: Setting Priorities at the Interface between Conservation and Primary Healthcare. People and Plants Working Paper 1. Paris: UNESCO.

Cushion, Elizabeth and Gerhard Dieterle. 2009. Bioenergy Development: Issues and impacts for poverty and natural resource management. Washington, D.C.: World Bank.

De Koning, R., Y. Yasmi, and D. Capistrano. 2008. Forest Conflict and Tenure. Bogor: CIFOR.

Domask, Joseph J. 1998. Evolution of the environmental movement in Brazil's Amazonia. Prepared for the 1998 meeting of the Latin American Studies Association, The Palmer House, Chicago, IL.

Doulman, David J. 1995. Structure and process of the 1993-1995 United Nations conference on straddling fish stocks and highly migratory fish stocks. Rome: FAO.

Duraiappah, Anantha Kumar. 2007. Markets for ecosystem services: a potential tool for multilateral environmental agreements. Winnipet, Canada: International Institute for Sustainable Development.

Eberlein, B. and D. Kerwer. 2002. Theorising the New New Modes of European Union Governance. European Integration online Papers (EIoP)

Edelenbos, Jurian and Jasper Eshuis. 2008. Dealing with Complexity through Trust and Control. In: Managing Complex Governance Systems. London: Routledge.

EIA (Environmental Investigation Agency). Working undercover since 1984. Available from: http://www.eia-international.org/.

Eliasch Review. 2008. Climate change: Financing global forests. Eliasch Review. UK: Crown Copyright.

Elliot, Lorraine M. 1998. The Global Politics of the Environment. New York: New York University Press.

Fitchner, W., S. Graehl, and O. Rentz. 2003. The impact of private investor's transaction costs on the cost of effectiveness of project-based Kyoto mechanisms. Climate Policy 3: 249-259.

FAO (Food and Agriculture Organization). 2005. Global forest resources assessment 2005. Rome: FAO.

FAO (Food and Agriculture Organization). 2007. State of the world's forests 2007. Rome: FAO.

FAO (Food and Agriculture Organization). 2009. State of the world's forests 2009. Rome: FAO.

FAOa (Food and Agriculture Organization). About trade in forest products and services. Available from http://www.fao.org/forestry/trade/en/.

FAOb (Food and Agriculture Organization). National Forest Programmes background. Available from http://www.fao.org/forestry/43644/en/page.jsp.

FAOSTAT. Forest Product Consumption and Production. Available from http://www.fao.org/forestry/28815/en/.

Forest Policy Research. Is REDD really without indigenous rights? Available from: http://forestpolicyresearch.org/2008/12/19/is-redd-really-without-indigenous-rights/.

Frohlich, Norman, and Joe A. Oppenheimer, and Oran R. Young. 1971. Political Leadership and Collective Goods. Princeton: Princeton University Press.

FSC (Forest Stewardship Council). History – Forest Stewardship Council. Available from http://www.fsc.org/history.html.

FSC-US (Forest Stewardship Council-US). N.d. FSC-US: Leading forest conservation and market transformation. Washington, DC: Forest Stewardship Council-US.

Gerbens-Leenes, P. et al.2002. A Method to determine land requirements relating to

food consumption patterns. Agriculture, Ecosystems and Environment, no. 90: 47-58.

Geist, Helmut J., and Eric F. Lambin. 2002. Proximate causes and underlying driving forces of tropical deforestation. Bioscience 52, no. 2: 143-150.

Grayson, A. J., and W. B. Maynard. 1997. The world's forests – Rio Plus 5: International initiatives towards sustainable management. Oxford: Commonwealth Forestry Association.

Great Britain Treasury. 2007. The economics of climate change: the Stern review. Cambridge, UK: Cambridge University Press.

Griffiths, Tom. 2008. Seeing 'REDD'?: Forests, climate change mitigation and the rights of indigenous peoples and local communities. Moreton-in-Marsh, UK: Forest Peoples Program.

Haas, Peter M., Robert O. Keohane, and Marc A. Levy. 1993. Institutions for the Earth: Sources of effective international environmental protection. Cambridge, MA: MIT Press.

Hajer, Maarten. 1995. The Politics of Environmental Discourse: Ecological Modernization and the Policy Process. Oxford: Oxford University Press.

Hajjar, R., and J.L. Innes. 2009. Forthcoming. The evolution of the World Bank's policy towards forestry: push pull?" International Forestry Review. Shropshire, UK: Commonwealth Forestry Association.

Hens, Luc, and Bhaskar Nath. 2005. World Summit on Sustainable Development. Dordrecht: Springer.

Hoogeveen, Hans. 1991. Geluidshinder rondom Schiphol: Een Vernieuwend Bestuurskundig Perspectief. 's Gravenhage: Vuga

Hoogeveen, Hans. 2006. United Nations Forum on Forests: People for forests, forests for people. Panel Discussion of the Chairpersons of the Functional Commissions ECOSOC, Palais de Nations, Geneva: July 7.

Hoogeveen, Hans. 2008. Forests and climate change: From complex problem to integrated solution. UN Chronicle Online Edition. Available from http://www.un.org/Pubs/chronicle/2007/issue2/0207p36.htm.

Hoogeveen, Hans, Jagmohan S. Maini, William Moomaw, Adil Najam, and Patrick Verkooijen. 2008b. Designing a Forest Financing Mechanism (FFM): A call for bold, collaborative & innovative thinking. Medford, MA: Tufts University.

Humphreys, David. 1996. Forest Politics: The Evolution of International Cooperation. London: Earthscan.

Humphreys, David. 2006. Logjam: Deforestation and the crisis of global governance. London: Earthscan.

IISD (International Institute for Sustainable Development). Sustainable development timeline. Available from: http://www.iisd.org/rio+5/timeline/sdtimeline.htm.

IMAZON. IMAZON Amazon institute of people and the environment. Available

from: http://www.imazon.org.br/novo2008/index.php.

Intergovernmental Panel on Climate Change (IPCC). 2000. Land use, land-use change, and forestry, ed. R.T. Watson. Cambridge: Cambridge University Press.

Intergovernmental Panel on Climate Change (IPCC). 2001. Working Group III: Mitigation, Links to Other Conventions.
http://www.grida.no/climate/ipcc_tar/wg3/419.htm

IPCC (Intergovernmental Panel on Climate Change). 2007. Climate change 2007: Synthesis report. Contribution of Working Groups I, II, and II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change ed. Rajendra K. Pachauri, Andy Reisinger, and Core Writing Team. Geneva, Switzerland: IPCC.

IUCN (International Union for Conservation of Nature and Natural Resources). About IUCN. Available from: http://www.iucn.org/about/.

IUCN (International Union for Conservation of Nature and Natural Resources). 1980. World Conservation Strategy: Living Resource Conservation for Sustainable Development. Gland, Switzerland: IUCN/UNEP/WWF.

IUFRO (International Union of Forest Research Organizations). 1992. 100 Years of IUFRO. Vienna, Austria: IUFRO.

IUFRO (International Union of Forest Research Organizations). 2009. Making forests fit for climate change: a global view of climate-change impacts on forests and people and options for adaptation. Vienna Austria: IUFRO

Jarvie, J. et.al. 2003. Conflict Timber: Dimensions of the problem in Asia and Africa. Volume 2: Asian cases. Final report submitted to the United States Agency for International Development.

Jasanoff, Sheila. 1990. The Fifth Branch: Science Advisers as Policymakers. Cambridge, Massachusetts: Harvard University Press.

Jenkins, Michael, Hosney El-Lakany, and Michael Richards. 2007. Background paper on means of implementation (Contribution by PROFOR for UNFF-7). Washington, DC: World Bank.

Jenkins, Michael, Sara J. Scherr, and Mira Inbar. 2004. Markets for biodiversity services: Potential roles and challenges. Environment 46, no. 6 (July/August): 32-42.

Kaimowitz, David. 2003. Forest law enforcement and rural livelihoods. International Forestry Review 5, no. 3: 199-210.

Kaimowitz, David. 2005. Forest and Human Health: Some Vital Connections. Bogor: CIFOR.

Kaimowitz, David. 2008. The prospects for reduced emissions from deforestation and degradation (REDD) in Mesoamerica. International Forestry Review 10, no. 3: 485-495.

Kaimowitz, David. 2008b. Forests and the millennium development goals. ETFRN News 47/48. Netherlands: European Tropical Forest Research Network.

Keck, Margaret E., and Kathryn Sikkink. 1998. Activists beyond borders: Advocacy

networks in international politics. Ithaca, NY: Cornell University Press.

Ki-moon, Ban. 2008. Secretary-General remarks at press conference on programme to reduce deforestation in developing countries. SG/SM/11812. New York: United Nations (September 24).

Kleiner, Kut. 2008. The backlash against biofuels. Nature Reports Climate Change 2 (December 12, 2007), 9-11.

Knigge, M., J.Herweg and D. Huberman. 2005. Geographical Aspects of International Environmental Governance: Illustrating Decentralisation. Berlin: Ecologic Institute for International and Environmental Policy.

Krishnaswamy, Ajit, and Arthur Hanson, ed. 1999. Our forests, our future. Winnipeg, Manitoba, Canada: World Commission on Forests and Sustainable Development.

Kurz, W., C. Dymond, G. Stinson, G. Rampley, E. Neilson, A. Carroll, T. Ebata, and L. Safranyik. 2008a. Mountain Pine Beetle and forest carbon feedback to climate change. Nature 452: 987–990.

Kurz, W., G. Stinson, G. Rampley, L. Dymond, and E. Neilson. 2008b. Risk of natural disturbances makes future contribution of Canada's forests to the global carbon cycle highly uncertain. Proceedings of the National Academy of Science 105, no. 5: 1551–1555.

Lebedys, Arvydas. 2004. Trends and current status of the contribution of the forestry sector to national economies. Forest Finance Working Paper FSFM/ACC/07. Rome: Food and Agriculture Organization.

Lee, Kwon H., Jeong E. Kim, Young J. Kim, Jhoon Kim, and Wolfgang Von Hoyningenhuene. 2005. Impact of the smoke aerosol from Russian forest fires on the environment over Korea during May 2003. Atmospheric Environment 39, no. 1 (January): 85-99.

Litfin, Karen. 1993. Ecoregimes: playing tug of war with the nation state' In The State and Social Power in Global Environmental Politics, ed Ronnie Lipschutz and Ken Conca. New York: Columbia University Press.

Litfin, Karen. 1994. Ozone Discourses: Science and politics in global environmental cooperation. New York: Columbia University Press.

Maini, Jagmohan S. 1996. Keynote speech. In Proceedings of the International Conference on Certification and Labeling of Products from Sustainably Managed Forests, 3-20. Brisbane, Australia: Department of Primary Industry and Energy.

Maini, Jagmohan S. 2003. International Dialogue on Forests: Impact on national policies and practices (keynote address). In Forest Policy for Private Forestry: Global and Regional Challenges, ed. Lawrence Teeter, Benjamin Cashore, and Daowei Zhang. New York: CABI Publishing.

Maini, Jagmohan S. 2004. Future International Arrangements on Forests. Background Discussion Paper Prepared for the Country-Led Initiative in Support of the UNFF on the Future of the International Arrangement on Forests. Guadalajara,

Mexico.

Mackey, Brendan et.al. 2008. Green Carbon: The role of natural forests in carbon storage. Canberra: The Australian University Press.

Meadows, Donella et.al. 1972. The Limits to Growth. New York: Universe Books.

Mendelsohn, Robert and Michael J. Balick. 1995. The value of undiscovered pharmaceuticals in tropical forests. Economic Botany 49, no. 2: 223-228.

Meridien Institute. 2009. Reducing Emissions from Deforestation and Forest Degradation (REDD): An Options Assessment Report. Available from http://www.REDD-OAR.org

Najam, Adil. 2002. Financing Sustainable Development: Crises of Legitimacy. In: Progress in Development Studies 2(2): 367-384.

Najam, Adil, Loli Christopoulou, and William Moomaw. 2004. The emergent "system" of global environmental governance. Global Environmental Politics 4.4: 23-35.

Najam, Adil, Mihaela Papa, and Nadaa Taiyab. 2006. Global environmental governance: A reform agenda. Winnipeg, Canada: International Institute for Sustainable Development.

Nash, Roderick. 1967. Wilderness and the American mind. New Haven, CT: Yale University Press.

National Park Service. Theodore Roosevelt and the national park system. Available from: http://www.nps.gov/history/history/hisnps/NPSHistory/teddy.htm.

Neufeld, Rodney. World Trade Organization and forest products: Rules and negotiations related to traditional knowledge of genetic resources, multilateral environmental agreements, labeling and government procurement. Rome: Food and Agriculture Organization.

OECD (Organization for Economic Co-operation and Development). 2005. Forests and violent conflict. Paris: OECD.

Oxfam. 2006. Hidden Treasure: In search of Mali's gold-mining revenues. Washington, D.C.: Oxfam America.

Pagiola, Stefano. 2006. Payments for environmental services in Costa Rica. MPRA Paper 2010. Washington, DC: World Bank.

Parker, Charlie, Andrew Mitchell, Mandar Trivedi, and Niki Mardas. 2008. Little REDD book: A guide to governmental and non-governmental proposals for reducing emissions from deforestation and degradation. Oxford: Global Canopy Foundation.

Partlow, J. and S. Kuffner. 2008. Voters in Ecuador Approve Constitution in: Washington Post, September 29, 2008.

Pattberg, Philipp. 2005. What Role for Private Rule-Making in Global Environmental Governance? Analyzing the Forest Stewardship Council. Springer: International Environmental Agreements: 175-189.

Pattberg, Philipp. 2007. Private Institutions and Global Governance: The New Politics of Environmental Sustainability. Cheltenham, UK: Edward Elgar.

Porter, Gareth, Janet Welsh Brown, Pamela Chasek. 2000. Global Environmental Politics. Oxford: Westview Press.

PROFOR. 2007. Background Paper on Means of Implementation: Contribution by PROFOR to discussions at UNFF7, April, 2007.

Rogers, Peter P., Kazi F. Jalal, and John A. Boyd. 2006. An introduction to sustainable development. Canada: The Continuing Education Division, Harvard University and Glen Educational Foundation.

Rights and Resources Initiative (RRI). Rights and Resources Initiative: Supporting forest tenure, policy and market reforms. Available from: http://www.rightsandresources.org/.

Richards, M. and M. Jenkins. 2007. Potential and Challenges of Payments for Ecosystem Services from Tropical Forests. ODI Forestry Briefing December 16, 2007.

Rittel, H. and M. Webber. 1973. Dilemmas in a general theory of planning. In Policy Science (4): 155-173.

Saunders, J., and R. Nussbaum. 2008. Forest governance and reduced emissions for deforestation and degradation. London: Chatham House Publications.

Schmincke, Karl-Hermann. 2008. Forest industries: Crucial for overall socio-economic development. Forest Policy Education Network. Available from http://forestpolicy.net/look/_fpen/article.tpl?IdLanguage=1&IdPublication=1&NrArticle=168&NrIssue=1&NrSection=30.

Scientific Council for Government Policy (WRR), 1994. Sustained Risk: A Lasting Phenomenon.

Scott, James. 1998. Seeing like a state: How certain schemes to improve the human condition have failed. New Haven: Yale University Press.

Seeland, Klaus, ed. 1997. Nature is culture: Indigenous knowledge and socio-cultural aspects of trees and forests in non-European cultures. London: Intermediate Technology Publications.

Seligmann, Peter, Russel A. Mittermeier, Gustavo A. B. da Fonseca, Claude Gascon, Niels Crone, Jose Maria Cardoso de Silva, Lisa Famolare, Robert Bensted-Smith, Leon Rajaobelina, and Bruce Beehler. 2007. Centers for Biological Diversity. Arlington, VA: Conservation International.

Seters, A. 1997. Medicinal Plants for Forest Conservation and Health Care. Non Wood Forest Products 11. Rome: FAO.

Shanley, P. and L. Luz. 2003. The Impacts of Forest Degradation on Medicinal Plant Use and Implications for Health Care in Eastern Amazonia. Bioscience 53(6): 573-584.

Simula, Markku. 2008. Mapping of existing and emerging sources of forest financing. Prepared for the First Design Meeting of the Forest Investment Program by the World Bank, Washington, DC.

Sitarz, Daniel. 1993. The complete book of personal legal forms. Boulder, CO: Nova

Publishing Company, Legal Publications Division.

Snellen, H. 1987. Boeiend en geboeid. Alphen: Samson

Soderland, Mia, and Alan Pottinger. 2001. The world's forests – Rio +8: Policy, practice and progress towards sustainable management. UK: Commonwealth Forestry Association.

Sunderlin, William et.al. 2005. Forest and Poverty Alleviation. In State of the World's Forests 2003. p 61-73. Rome: Food and Agricultural Organization.

Sunderlin, William et.al. 2006. Forests, Poverty, and Poverty Alleviation Policies. Background paper for World Bank policy Research Report "At Loggerheads". CIFOR, Bogor, Indonesia.

Sunderlin, William, Jeffrey Hatcher, and Megan Liddle. 2008. From exclusion to ownership? Challenges and opportunities in advancing forest tenure reform. Washington, DC: Rights and Resources Initiative.

Susskind, Lawrence. 1994. Environmental Diplomacy: Negotiating More Effective Global Agreements. Oxford: Oxford University Press.

Taxin, Amy. 2008. Avoided deforestation: A tool for conservation in the resource rich Amazon Basin. MALD Thesis, The Fletcher School of Law & Diplomacy, Tufts University.

Teisman, Geert. 2000. Models for Research into Decision-Making Processes: On Phases, Streams, and Decision-Making Rounds. Public Administration 78(4): 937-56.

Teisman, Geert, Arwin van Buuren and Lasse Gerrits. 2008. Managing Complex Systems: Dynamics, Self-Organization and Coevolution in Public Investments. London: Routledge.

TFD (The Forest Dialogue). 2008. Beyond REDD: The role of forests in climate change. New Haven, CT: The Forest Dialogue.

TFD (The Forest Dialogue). 2008a. Global Forest Leaders Forum: Background paper on capacity building. New Haven, CT: The Forest Dialogue.

TFD (The Forest Dialogue). 2008b. Global Forest Leaders Forum: Background paper on a coherent approach to forests. New Haven, CT: The Forest Dialogue.

TFD (The Forest Dialogue). 2008c. Global Forest Leaders Forum: Background on governance. New Haven, CT: The Forest Dialogue.

Thompson, Ian 2009. A synthesis on the biodiversity-resilience relationship in forest ecosystems. Ontario, Canada: Forest Service.

Tolba, Mostafa Kamal, and Iwona Rummel-Bulska. 1998. Global environmental diplomacy: Negotiating environmental agreements for the world, 1973-1992. Cambridge, MA: MIT Press.

UN (United Nations). 1992. United Nations Conference on Environment and Development. New York, NY: United Nations.

UNGA (UN General Assembly). 1989. United Nations Conference on the Environment and Development. A/RES/44/228. December 22.

UNGA (UN General Assembly). 1992. Report of the United Nations Conference on Environment and Development. A/CONF.151/26 (Vol. I). August 12.

UNGA (UN General Assembly). 1997. Programme for the further implementation of Agenda 21. A/RES/S-19/2. September 19.

UNGA (UN General Assembly). 2007a. United Nations Declaration on Rights of Indigenous Peoples. A/RES/61/295. October 2.

UNGA (UN General Assembly). 2007b. Non-Legally Binding Instrument on all types of forests. A/RES/62/98. December 17.

U.S. Forest Service International Program. Timeline on the dialogue on sustainable forest management. Available from: http://www.fs.fed.us/global/aboutus/policy/multi/history.htm#2.

Verkooijen, Patrick. 2008. Forest investment program: Summary of the first design meeting. Washington, DC: The World Bank.

Verkooijen, Patrick, and Gerhard Dieterle. 2008. Climate investment funds. Issues Note for the Forest Investment Program of the Strategic Climate Fund. Washington, DC: World Bank.

Wapner, Paul. 1996. Environmental activism and world civic politics. Albany: State University of New York Press.

WBCSD (World Business Council for Sustainable Development). World Business Council for Sustainable Development. Available from: www.wbcsd.org/.

Weiss, Thomas G. et.al.. 2004. The United Nations and changing world politics. U.S.: Westview Press.

Weiss, Thomas G.et.al. 2009. Sustainable Global Governance for the 21st Century. Conference Paper: Dialogue on Globalization.

Wettestad, Jørgen. 2005. The making of the 2003 EU emissions trading directive: An ultra-quick process due to entrepreneurial proficiency? Global Environmental Politics 5, no. 1: 1-24.

Wilkinson, Clive. 2008. Status of coral reefs of the world: 2008. Townsville, Austrailia: Global Coral Reef Monitoring Network and Reef and Rainforest Centre.

Wilson, Edward (eds). 1988. Biodiversity. Washington, D.C.: National Academy of Sciences Press.

World Bank. 2004. Sustaining Forests: a development strategy. Washington, D.C.: World Bank.

World Bank. 2007a. Global Economics Prospects 2007. Washington, D.C.: World Bank.

World Bank. 2007. World development report. Washington, DC: World Bank.

World Bank, Collaborative Partnership on Forests, PROFOR. 2008. Forests sourcebook: Practical guidance for sustaining forests in development cooperation. Washington, DC: World Bank.

World Bank. 2008b. Mapping of existing and emerging sources of forest financing. In Forest Investment Program (FIP) first design meeting. Washington, DC: Climate Investment Funds.

World Bank. 2008c. Poverty and Forest Linkages: A Synthesis and Six Case Studies. Washington, DC: World Bank.

World Commission on Environment and Development. 1987. Our Common Future. Oxford: Oxford University Press.

World Resources Institute. 2006. Human Pressure on the Brazilian Amazon Forests. Washington, D.C.

Worldwatch Institute. Environmental milestones. Available from: http://www.worldwatch.org/brain/features/timeline/timeline.htm.

WRR. 1994. Duurzame Risico's: een blijvend gegeven. Den Haag: Sdu Uitgeverij.

Wunder, Sven. 2006. The economics of deforestation: The example of Ecuador. St. Anthony's Series. NY: St. Martin's Press, Inc.

Young, Oran R. 1994. International Governance: Protecting the Environment in a Stateless World. Ithaca, NY: Cornell University Press.

Young, Oran R. 1999. The effectiveness of international environmental regimes causal connections and behavioral mechanisms. Cambridge, MA: MIT Press.

Annex 1.

Forest Timeline

1945 – First meeting of the Food and Agriculture (FAO) Conference.

1948 –International Union for Nature and Natural Resources (IUCN) is founded as the world's first international organization devoted to natural resource conservation engaging government and non-governmental organizations.

1972 - United Nations Conference on Human Environment held in Stockholm under the leadership of Maurice Strong. The conference was primarily rooted in the regional pollution and acid rain problems of northern Europe. The conference leads to the establishment of numerous national environmental protection agencies and the United Nations Environment Programme (UNEP).

1972 – First meeting of the Committee on Forestry (COFO).

1973 - Chipko Movement born in India in response to deforestation and environmental degradation. The actions of the women of the community influenced both forestry and women's participation in environmental issues.

1975 - Convention on International Trade in Endangered Species of Flora and Fauna (CITES) comes into effect.

1977 - Greenbelt Movement is started in Kenya by Wangari Maathai. It is based on community tree-planting to prevent desertification.

1977 - UN Conference on Desertification is held.

1980 - World Conservation Strategy released by IUCN. The strategy defines development as "the modification of the biosphere and the application of human, financial, living and non-living resources to satisfy human needs and improve the quality of human life".

1982 - International Union of Forest Research Organizations (IUFRO) was established

1983 – International Tropical Timber Agreement (ITTA) was adopted.

1986 – International Tropical Timber Organization (ITTO) was established. It adopted the Year 2000 Objective to manage tropical forests sustainably and begin work on guidelines for as a reference standard for sustainable management of natural forests.

1987 - "Our Common Future" (Brundtland Report) published. It focuses on challenges associated with environment and development. It also popularizes the term "sustainable development".

1988 – Chico Mendez, Brazilian labor and environmental leader representing 70,000 rubber tappers, is murdered. He had advocated for sustainable use of Brazil's forests (rather than deforestation for timber and grazing), and his death brought worldwide attention to the plight of tropical forests.

1988 - Inter-governmental Panel on Climate Change established with three working groups to assess the most up-to-date scientific, technical and socio-economic research in the field of climate change.

1992 - U.N. Conference on Environment and Development (UNCED) held in Rio de Janeiro. Intergovernmental negotiations and agreements result in the publication of Agenda 21, the Convention on Biological Diversity, the Framework Convention on Climate Change, the Rio Declaration, and the first statement on world's forest policy with the Forest Principles.

1993 - Commission on Sustainable Development

Established at the UN in New York included forests in its multi-year program of work

1993 - Commission on Security and Cooperation in Europe (CSCE) hosts in Montreal, Canada International Seminar of Experts on Sustainable Development of Boreal and Temperate Forests. This launched the broad international dialogue on scientifically based criteria and indicators to assess progress towards sustainable development of temperate and boreal forests. The Pan-European and the Montreal Criteria and Indicators Processes have their origins in this meeting.

Apendix 1.1993 – Montreal Process - Launched an ongoing ad hoc dialogue among ten temperate and boreal forest nations (including the United States) to further the common understanding of sustainable forestry as well as seek consensus and develop a means to report on national progress toward that goal.

1995 - Santiago Declaration was endorsed by ten nations (later 12 nations) as a commitment to use a comprehensive set of seven criteria and 67 related indicators to report on national progress toward forest conservation and sustainable management of temperate and boreal forests (results of Montreal Process).

1995 – UN's Intergovernmental Panel on Forests (IPF) was established. By 1997, it adopts 149 Proposals for Action to help countries implement sustainable forest management.

1997 - Foreign Ministers of G8 Countries, eight of the world's largest industrialized nations, decide to implement sustainable forest management.

1997 - UN's Intergovernmental Forum on Forests (IFF) was created. It produced additional Proposals for Action, in addition to the IPF Proposals, on topics such as trade and environment, traditional forest related knowledge, financing mechanisms, and research and debated the pros and cons of an international forest convention.

2000 - UN Forum on Forests (UNFF) - Established as a permanent arrangement to facilitate the implementation of the IPF/IFF Proposals for Action, provide forum for policy dialogue, enhance coordination of work of international organizations, foster international cooperation, monitor and assess progress, and enhance political commitment to sustainable forest management.

2003 - International Conference on Criteria and Indicators (CICI) - Conference of experts from 55 nations reviewed and reaffirmed political commitment to use of Criteria and Indicators to promote Sustainable Forest Management.

2007 – Adoption of Non-Legally Binding Instrument on All Types of Forests

2007 – Adoption of Bali Action Plan UNFCCC with reference to REDD, SFM and enhancement of carbon sinks

Annex 2.

Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests

PREAMBLE

(a) The subject of forests is related to the entire range of environmental and development issues and opportunities, including the right to socio-economic development on a sustainable basis.

(b) The guiding objective of these principles is to contribute to the management, conservation and sustainable development of forests and to provide for their multiple and complementary functions and uses.

(c) Forestry issues and opportunities should be examined in a holistic and balanced manner within the overall context of environment and development, taking into consideration the multiple functions and uses of forests, including traditional uses, and the likely economic and social stress when these uses are constrained or restricted, as well as the potential for development that sustainable forest management can offer.

(d) These principles reflect a first global consensus on forests. In committing themselves to the prompt implementation of these principles, countries also decide to keep them under assessment for their adequacy with regard to further international cooperation on forest issues.

(e) These principles should apply to all types of forests, both natural and planted, in all geographical regions and climatic zones, including austral, boreal, sub temperate, temperate, subtropical and tropical.

(f) All types of forests embody complex and unique ecological processes which are the basis for their present and potential capacity to provide resources to satisfy human needs as well as environmental values, and as such their sound management and conservation is of concern to the Governments of the countries to which they belong and are of value to local communities and to the environment as a whole.

(g) Forests are essential to economic development and the maintenance of all forms of life.

(h) Recognizing that the responsibility for forest management, conservation and sustainable development is in many States allocated among federal/national, state/provincial and local levels of government, each State, in accordance with its constitution and/or national legislation, should pursue these principles at the appropriate level of government.

Principles/Elements

1. (a) States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and have the responsibility to ensure that

activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

(b) The agreed full incremental cost of achieving benefits associated with forest conservation and sustainable development requires increased international cooperation and should be equitably shared by the international community.

2. (a) States have the sovereign and inalienable right to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development and on the basis of national policies consistent with sustainable development and legislation, including the conversion of such areas for other uses within the overall socio-economic development plan and based on rational land-use policies.

(b) Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. These needs are for forest products and services, such as wood and wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs, and for other forest products. Appropriate measures should be taken to protect forests against harmful effects of pollution, including air-borne pollution, fires, pests and diseases, in order to maintain their full multiple value.

(c) The provision of timely, reliable and accurate information on forests and forest ecosystems is essential for public understanding and informed decision-making and should be ensured.

(d) Governments should promote and provide opportunities for the participation of interested parties, including local communities and indigenous people, industries, labour, non-governmental organizations and individuals, forest dwellers and women, in the development, implementation and planning of national forest policies.

3. (a) National policies and strategies should provide a framework for increased efforts, including the development and strengthening of institutions and programmes for the management, conservation and sustainable development of forests and forest lands.

(b) International institutional arrangements, building on those organizations and mechanisms already in existence, as appropriate, should facilitate international cooperation in the field of forests.

(c) All aspects of environmental protection and social and economic development as they relate to forests and forest lands should be integrated and comprehensive.

4. The vital role of all types of forests in maintaining the ecological processes and balance at the local, national, regional and global levels through, inter alia, their role in protecting fragile ecosystems, watersheds and freshwater resources and as rich storehouses of biodiversity and biological resources and sources of genetic material for biotechnology products, as well as photosynthesis, should be recognized.

5. (a) National forest policies should recognize and duly support the identity, culture and the rights of indigenous people, their communities and other communities and forest dwellers. Appropriate conditions should be promoted for these groups to enable

them to have an economic stake in forest use, perform economic activities, and achieve and maintain cultural identity and social organization, as well as adequate levels of livelihood and well-being, through, inter alia, those land tenure arrangements which serve as incentives for the sustainable management of forests.

(b) The full participation of women in all aspects of the management, conservation and sustainable development of forests should be actively promoted.

6. (a) All types of forests play an important role in meeting energy requirements through the provision of a renewable source of bio-energy, particularly in developing countries, and the demands for fuel wood for household and industrial needs should be met through sustainable forest management, afforestation and reforestation. To this end, the potential contribution of plantations of both indigenous and introduced species for the provision of both fuel and industrial wood should be recognized.

(b) National policies and programmes should take into account the relationship, where it exists, between the conservation, management and sustainable development of forests and all aspects related to the production, consumption, recycling and/or final disposal of forest products.

(c) Decisions taken on the management, conservation and sustainable development of forest resources should benefit, to the extent practicable, from a comprehensive assessment of economic and non-economic values of forest goods and services and of the environmental costs and benefits. The development and improvement of methodologies for such evaluations should be promoted.

(d) The role of planted forests and permanent agricultural crops as sustainable and environmentally sound sources of renewable energy and industrial raw material should be recognized, enhanced and promoted. Their contribution to the maintenance of ecological processes, to offsetting pressure on primary/old-growth forest and to providing regional employment and development with the adequate involvement of local inhabitants should be recognized and enhanced.

(e) Natural forests also constitute a source of goods and services, and their conservation, sustainable management and use should be promoted.

7. (a) Efforts should be made to promote a supportive international economic climate conducive to sustained and environmentally sound development of forests in all countries, which include, inter alia, the promotion of sustainable patterns of production and consumption, the eradication of poverty and the promotion of food security.

(b) Specific financial resources should be provided to developing countries with significant forest areas which establish programmes for the conservation of forests including protected natural forest areas. These resources should be directed notably to economic sectors which would stimulate economic and social substitution activities.

8. (a) Efforts should be undertaken towards the greening of the world. All countries, notably developed countries, should take positive and transparent action towards reforestation, afforestation and forest conservation, as appropriate.

(b) Efforts to maintain and increase forest cover and forest productivity should be undertaken in ecologically, economically and socially sound ways through the

rehabilitation, reforestation and re-establishment of trees and forests on unproductive, degraded and deforested lands, as well as through the management of existing forest resources.

(c) The implementation of national policies and programmes aimed at forest management, conservation and sustainable development, particularly in developing countries, should be supported by international financial and technical cooperation, including through the private sector, where appropriate.

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

(e) Forest management should be integrated with management of adjacent areas so as to maintain ecological balance and sustainable productivity.

(f) National policies and/or legislation aimed at management, conservation and sustainable development of forests should include the protection of ecologically viable representative or unique examples of forests, including primary/old-growth forests, cultural, spiritual, historical, religious and other unique and valued forests of national importance.

(g) Access to biological resources, including genetic material, shall be with due regard to the sovereign rights of the countries where the forests are located and to the sharing on mutually agreed terms of technology and profits from biotechnology products that are derived from these resources.

(h) National policies should ensure that environmental impact assessments should be carried out where actions are likely to have significant adverse impacts on important forest resources, and where such actions are subject to a decision of a competent national authority.

9. (a) The efforts of developing countries to strengthen the management, conservation and sustainable development of their forest resources should be supported by the international community, taking into account the importance of redressing external indebtedness, particularly where aggravated by the net transfer of resources to developed countries, as well as the problem of achieving at least the replacement value of forests through improved market access for forest products, especially processed products. In this respect, special attention should also be given to the countries undergoing the process of transition to market economies.

(b) The problems that hinder efforts to attain the conservation and sustainable use of forest resources and that stem from the lack of alternative options available to local communities, in particular the urban poor and poor rural populations who are economically and socially dependent on forests and forest resources, should be addressed by Governments and the international community.

(c) National policy formulation with respect to all types of forests should take account of the pressures and demands imposed on forest ecosystems and resources from

influencing factors outside the forest sector, and intersectoral means of dealing with these pressures and demands should be sought.

10. New and additional financial resources should be provided to developing countries to enable them to sustainably manage, conserve and develop their forest resources, including through afforestation, reforestation and combating deforestation and forest and land degradation.

11. In order to enable, in particular, developing countries to enhance their endogenous capacity and to better manage, conserve and develop their forest resources, the access to and transfer of environmentally sound technologies and corresponding know-how on favourable terms, including on concessional and

preferential terms, as mutually agreed, in accordance with the relevant provisions of Agenda 21, should be promoted, facilitated and financed, as appropriate.

12. (a) Scientific research, forest inventories and assessments carried out by national institutions which take into account, where relevant, biological, physical, social and economic variables, as well as technological development and its application in the field of sustainable forest management, conservation and development, should be strengthened through effective modalities, including international cooperation. In this context, attention should also be given to research and development of sustainably harvested non-wood products.

(b) National and, where appropriate, regional and international institutional capabilities in education, training, science, technology, economics, anthropology and social aspects of forests and forest management are essential to the conservation and sustainable development of forests and should be strengthened.

(c) International exchange of information on the results of forest and forest management research and development should be enhanced and broadened, as appropriate, making full use of education and training institutions, including those in the private sector.

(d) Appropriate indigenous capacity and local knowledge regarding the conservation and sustainable development of forests should, through institutional and financial support and in collaboration with the people in the local communities concerned, be recognized, respected, recorded, developed and, as appropriate, introduced in the implementation of programmes. Benefits arising from the utilization of indigenous knowledge should therefore be equitably shared with such people.

13. (a) Trade in forest products should be based on non-discriminatory and multilaterally agreed rules and procedures consistent with international trade law and practices. In this context, open and free international trade in forest products should be facilitated.

(b) Reduction or removal of tariff barriers and impediments to the provision of better market access and better prices for higher value-added forest products and their local processing should be encouraged to enable producer countries to better conserve and manage their renewable forest resources.

(c) Incorporation of environmental costs and benefits into market forces and

mechanisms, in order to achieve forest conservation and sustainable development, should be encouraged both domestically and internationally.

(d) Forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies.

(e) Fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation should be avoided. Adequate policies, aimed at management, conservation and sustainable development of forests, including, where appropriate, incentives, should be encouraged.

14. Unilateral measures, incompatible with international obligations or agreements, to restrict and/or ban international trade in timber or other forest products should be removed or avoided, in order to attain long-term sustainable forest management.

15. Pollutants, particularly air-borne pollutants, including those responsible for acidic deposition, that are harmful to the health of forest ecosystems at the local, national, regional and global levels should be controlled.

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