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Forest Policies for a Sustainable Humanosphere

Wil de Jong (editor)

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for a
Sustainable Humanosphere

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Wil de Jong, Editor

CIAS

IN SEARCH OF SUSTAINABLE HUMANOSPHERE

Contents

Foreword

The role of forests in human society has evolved throughout modern history. Major changes in the global importance of forests have taken place in recent decades. During much of the second half of the 20th century forests remained a source for timber to feed a vibrant timber industry. In Europe, landscape, biodiversity and recreational values became more important in the 1970s. In tropical countries forests became recognized as having importance for their potential to promote rural development, their high biodiversity value and as a source of timber. Since 2008 we have seen an important revaluation of forests. Deforestation is now believed to comprise approximately 20% of global carbon dioxide emissions. Reducing deforestation and forest degradation (REDD) and promoting reforestation are being advocated as important options to curb global emissions.

At the same time, forests compete for land with prospective biofuel crops. Biofuel production, the international financial crisis and fluctuations in oil prices are increasing the costs of living worldwide, putting pressure especially on poor families' budgets. Many of those who are negatively affected by high food prices turn to forests to complement monetary income or to substitute consumables lacking because of declining incomes.

The changing role of forests requires adequate policy responses. Policy is a key element that mediates the relationship between human societies and the environment. For that reason, policy making is very much debated among academics as well as practitioners concerned with either environmental dependency or the impact of society's environmental use. Policies need to be adapted constantly to changing societal environmental needs or to changing environmental capacities to deliver goods and services.

For that reason, the Center for Integrated Area Studies (CIAS, Kyoto University) and partners held an international symposium to address the two following questions:

1. What are the general features of forest policies for the coming years or decades, considering the changing demands of human society on forests and the changing forest capabilities to provide for those demands?
2. How can academic research contribute to a better understanding of forest policy and thus improve the process of forest policy making?

The symposium "Forest Policies for a Sustainable Humanosphere" was held on February 17 and 18, 2009 at the Inamori Center, Kyoto University. Participants included experts on forest policy in Japan, Asia, Africa, Latin America and Europe. This publication, CIAS Discussion Paper 8, contains seven papers from participants at the event.

The composition of chapters in this volume reflects the issues of forest policy worldwide as they are evolving today. Katerere's Chapter One and de Jong's Chapter Three review the status and challenges of forest policy in major regions in Africa and South America. The contrast with Krott's Chapter Two is remarkable, but also indicative of possible future trends in tropical regions. The degree of negotiations and processes to establish multinational governance without losing national identity is a struggle in Europe. The same struggle is likely to take place in the three tropical regions of the world as the need to streamline forest policies across borders is widely recognized.

Policy sciences and research have an important contribution to make to the policy formulation and implementation process. Academic analysis can assess the rationality and effectiveness of policies. Arts' Chapter Four demonstrates that policy analysis and the outcomes of such analysis are influenced by the underlying policy theories and models that are used. Three case study chapters, two from the Netherlands by Buizer and van Gossum respectively and one from Thailand by Ubukata reinforce and illustrate the general points that are made in the initial chapters.

Together the chapters in this volume provide a comprehensive overview of the challenges that lie ahead for forest policy in tropical and temperate regions and point to some new directions that can be taken. They show that while situations in major regions are different, there are important similarities and opportunities to learn from each other. The papers also show that academic views on forest policy and its analysis are an undervalued resource that could benefit forest policy formulation and implementation during a time when forests are achieving yet greater recognition as important resources that can help solve pressing problems of human society worldwide.

Several institutions have generously provided funds for the symposium and the publication of this Discussion Paper. Kyoto University sponsored the organization of the event, as did the Center for Integrated Area Studies. Participants' travel was

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Forest policy making in Sub-Saharan Africa: Challenges and opportunities for climate change and globalization

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Abstract

This paper offers broad forest policy options for Sub-Saharan Africa (SSA) in the face of new realities under climate change and globalization. The analytical framework starts with background information and trends for the region before examining the challenges and opportunities presented by climate change and globalization. The paper points out that SSA, home to 800 million people, has 17% of the world's total forests and 20% of the world's biodiversity hotspots. In recent years SSA has experienced some encouraging annual economic growth rates reaching 7% in 2007. Despite this progress, Africa has 22 of the world's 25 poorest countries, and the number of people living in extreme poverty has been increasing. With forests gaining a new prominence due to their significant contribution to global carbon emissions, the paper analyzes the policy challenges presented by the evolving global carbon markets, concluding that REDD will not benefit all forests and countries equally. The impacts of climate change will affect SSA more than any other region because its people largely lack the means to adapt. Globalization is not new, but its pace and scope has accelerated, and it has created winners and losers. The paper highlights how under globalization, impacts affecting forests are driven by decisions in far away places and often outside the sector. The pace and complexity of globalization demands new national policy capacities, nimbleness and a transformation of forestry and related institutions. The paper briefly looks at how globalization is also driving biofuel development in SSA. The paper concludes with six key policy challenges that will confront SSA and how countries might respond.

Introduction

This paper examines the opportunities and challenges for effective forest policy making and implementation in Sub-Saharan African (SSA) in the face of climate change and globalization. Climate change and the globalization process could potentially undermine SSA's ability to benefit from its timber and forest ecosystem services for livelihoods and national development. When reviewing the challenges and opportunities for forest policy in the context of globalization and climate change, we need to understand that while SSA forests and people are diverse, they do share many commonalities. For example, while the region varies economically, geographically, ecologically and socio-culturally, there are similar patterns of forest and other resource dependency. Thus, without denying that the subcontinent is heterogeneous, this paper offers some broad directions for responding to new realities affecting the region.

Any country that hopes to respond effectively to the forest policy challenges and opportunities presented by climate change and globalization requires the capacity to analyze and synthesize complex and dynamic sets of information and interactions that inform the forest policy-making environment. The fluidity of global trends also demands that policy actors and policy analysts shift mindset and recognise that the strong links between adverse environmental change, such as climate change, and human vulnerability demand more active collaboration between biophysical and

social scientists and between key sectors such as NGOs and governments. Furthermore, forestry and related institutions are under pressure to transform from promoting a forest management agenda and approach that is driven by a preoccupation with control and enforcement to one emphasising the services provided by forests. More importantly, there needs to be recognition that forest policies cannot be developed in isolation from other sectors. Often the greatest constraints to forestry development lie outside the forestry sector. Understanding and addressing these constraints can go a long way in realising the value and benefits of forests.

Globalization is not a new paradigm for SSA. The first serious impacts of globalization on SSA date back to the late 1980s and 1990s when structural adjustment programs (SAPs) were imposed as conditionality for loans from the Brenton Woods Institutions. Many of these SAPs failed to take the environment explicitly into account in their design. In 2008 the adverse impacts of globalization came into sharp focus in the form of the global financial crisis. Oil and food price shocks and turmoil in the commodities market presented substantial challenges for the subcontinent. While the record high oil prices reached in July 2008 benefited oil exporting countries, such as Nigeria, Central African Republic and Angola, they have hurt many oil importing countries, including Malawi, Zambia and Zimbabwe. The December 2008 decline in oil prices might provide much needed relief if it is sustained.

As in other parts of the world, the fluctuating price of oil and the emission levels generated by the global transport sector have also contributed to a growing interest in renewable energy, which has encouraged the production of biofuels from crops such as corn, rapeseed, sugarcane and palm oil. There are real concerns that a growing demand for biofuels could result in increased competition for land that threatens food production, which

Figure 1: Forest, woodland and vegetation cover in Africa. Source: UNEP.

Forest classes

▪ Closed evergreen lowland forest
▪ Degraded evergreen lowland forest
▪ Submontane forest (900-1500.)
▪ Montane forest (>1500m)
▪ Swamp forest
▪ Mangrove
▫ Mosaic forest/croplands
▪ Mosaic forest/savanna
▪ Closed deciduous forest

Woodlands and grasslands

▪ Deciduous woodland
▪ Deciduous shrubland
    with sparse trees
▪ Open deciduous shrubland
▪ Closed grassland
▪ Open grassland with sparse shrubs
▫ Open grassland
▫ Sparse grassland
▪ Swamp bushland and grassland

Agriculture

▪ Croplands (>50%)
▫ Croplands with open
    woody vegetation
▪ Irrigated croplands
▪ Tree crops

Bare soil

▫ Sandy desert and dunes
▫ Sandy desert
▪ Bare rock
▫ Salt hardpans

Other

▪ Water bodies
▪ Cities

in turn contributes towards food price hikes and exacerbates inequities between rich and poor.

While much of the subcontinent appears largely unaffected in the short term by the impacts of higher fuel and food prices and market turmoil, its economies are still likely to suffer. The slowing global economy could reduce the appetite for African products (including forests), impact tourism and reduce remittances sent by Africans working abroad. For example, in Kenya remittances which contribute up to 5% of GDP are projected to decline by as much as 40% (Mass and Willem te Velde 2008).

Forest Resources

Sub-Saharan Africa's forest resources are estimated to cover an area of 650 million hectares (See Figure 1 for distribution of forest and woodland cover). This represents approximately 17% of the world's total forest cover and 20% of the world's biodiversity hotspots (FAO 2007). The Congo Basin is the second largest continuous block of tropical rainforest in the world after the Amazon. The Basin accounts for more than 60% of Africa's biodiversity and ranks first in Africa for many taxonomic groups in terms of species richness (*Ibid.*). The miombo woodland, covering an estimated 270 million hectares, is the most extensive tropical seasonal woodland and dry forest formation in Africa and includes areas that receive more than 700mm of mean annual rainfall on nutrient poor soils. Substantial portions of South and Central African countries, including Angola, Zimbabwe, Zambia, Malawi, Mozambique, Tanzania and most of the southern part of the Democratic Republic of Congo (DRC) are covered by miombo woodland (Frost 1996). An estimated 40 million people inhabit areas covered, or formerly covered, by miombo woodland, with an additional 15 million urban dwellers relying on miombo sourced wood or charcoal for household energy (Campbell et al. 2006, SEI 2002).

Trends

Forest and tree loss

Despite their importance, Africa's forests continue to decline at a rapid rate: from 1990 to 2005, more than 9% of Africa's forests were lost at an average annual rate of approximately four million hectares. Although Africa hosts only 17% of the world's forests, the continent accounts for over half of global deforestation (FAO 2007). The greatest global net reduction of forest area between 1990 and 2000 occurred in SSA and was estimated at 52 million hectares, a loss of approximately 0.8% of the forest area per year (UNEP 2008). Loss of

tropical dry forest in east and southern Africa, predominately in dryland regions, accounted for the majority of this decline (Millennium Ecosystem Assessment 2004). Human population growth, poverty, high dependence on natural resources and economic pressures to increase exports—especially agricultural, timber and mineral products—are key contributors to this decline in forested area (UNEP 2008). As supplies of wood and non-wood products from forests decline, the protection of trees and small groves of indigenous trees outside forests—e.g. grown on homesteads and communal lands—is becoming more important.

Growing Population

Current economic trends, climate change, a growing population and high rates of urbanization will have enormous implications for reducing poverty in SSA. Estimates show that by 2020 the urban population will be 646 million, more than double what it was in 2000 (302 million). By 2050 Africa's urban population is expected to be 53.5% of the total population, compared to 39% in 2005 (ESA 2007). All these trends will threaten access to food, water and forests, possibly increasing conflict. Policy interventions informed by research are essential to prevent or mitigate the impact of these changes.

Increasing resource dependency

An estimated 70% of the population of Sub-Saharan Africa (SSA) is rural and depends directly or indirectly on forests and woodlands for its livelihood (World Bank 2004). The World Bank further estimates that at least 20 percent of the disposable income available to landless and poor families also comes from forests (*Ibid.*). High dependence on natural resources in the absence of effective mechanisms for managing trade-offs has driven competition between different sectors and interests, resulting in increasing conflicts and resource degradation. Furthermore, rural poverty levels are high. Improved land management is therefore critical for national development, poverty reduction, and social stability.

SSA's dynamic landscape mosaics are changing due largely to anthropogenic factors, the interplay of people with changing ecosystems and climate change. In most areas of SSA there are pressures on forests due to heavy dependence on ecosystem resources for subsistence and economic activities such as mining, hydro-power generation and irrigation. These trends in deforestation and resource dependency are likely to be compounded by high population growth which will remain largely rural.

Economic trends

Economic growth in Sub-Saharan Africa, outside of South Africa, achieved a remarkable 7% annual increase in 2007, the highest in some 35

years. By 2010 this annual growth is expected to decline to 6.6%. Despite positive gains in economic development, 22 of the world's 25 poorest countries (and 33 of the poorest 50), based on gross national income, are in Africa, as are 29 of the 31 least developed countries. Such trends have resulted in Africa having one of the highest levels of inequity. South Africa and Namibia, for instance, are among the world's most inequitable nations (World Bank 2008).

In many forest rich countries commercial logging is an important source of foreign currency. Cameroon, for example, is among Africa's leading producers and exporters of sawn timber and tropical logs; it ranks fifth in the world. In 2001, Equatorial Guinea exported US$62 million of wood-based panels, representing 14% of its GDP (ADB 2007). The dependence on exporting raw materials to earn much needed foreign currency continues to encourage a pattern of unsustainable natural resource use.

Forests and Climate Change

Forests started gaining new attention in 2005 when a group of developing countries with rainforests presented a proposal requesting that the Conference of the Parties (COP) at the United Nations Framework Convention on Climate Change (UNFCCC) include reducing emissions from deforestation in their discussions. This proposal was made following a growing recognition that deforestation generates carbon emissions (Coalition for Rainforest Nations 2008). Forests gained further prominence with the publication of the Fourth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC). The IPCC estimated that 1.7 billion tons of carbon are released annually due to land-use change, of which the majority is tropical deforestation. This represents 20–25% of current global carbon emissions, which is greater than the percentage from the fossil fuel-intensive global transport sector (Parry et al. 2007).

The potential for emissions mitigation through forestry in the African region per year is estimated at 14% of the global total and the avoided-deforestation potential at 29% of the global total (Bryan et al. 2008). The Central African forests provide a critical buffer against global climate change, storing an estimated than 23 billion tons or more of carbon (World Bank 2004).

While forests are receiving this new interest, policy makers should not lose sight of the fact that there are other carbon-rich ecosystems such as grasslands. This is particularly important for dry forest countries that are concerned that they might be excluded from a post-Kyoto Reducing Emissions from Deforestation and Degradation (REDD) regime.

Climate Mitigation: REDD

Forestry contributes 17.4% and agriculture another 13.1% of global annual emissions (IPCC 2007a). Hence controlling deforestation in tropical developing countries is seen as a low cost strategy for reducing carbon emissions (Seymour 2008). The magnitude of carbon emissions from deforestation and degradation means that REDD requires a global and national mitigation response. Any action on reducing emissions from deforestation and degradation in developing countries could lead to better protection of forests with prospects for rewarding countries taking measures to protect their forests. This would require establishing a trading mechanism to enable developing countries to sell carbon credits on the basis of successful reductions in emissions from deforestation and forest degradation (Miles and Kapos 2008). The full extent and implications of such arrangements under a post-Kyoto emissions reduction agreement is still unknown, however simplifying the rules under the Clean Development Mechanism (CDM) in response to additionality criteria, changing the definition of afforestation and reforestation and addressing high transaction costs will increase effectiveness (Bryan et al. 2008). Currently developing countries can benefit from the regulated carbon market under the Kyoto Protocol's CDM. With only 2% of all CDM projects, Africa lags behind Latin America, Asia and the Pacific regions which collectively host 96% of all CDM projects. (UNEP-RISO Centre; CD4CDM 2009).

As attention refocuses on forests and their newly appreciated linkages to climate change mitigation and adaptation, the spotlight on REDD and carbon trading will inevitably shift forest management objectives towards carbon trading and climate change. However, it is important for policy makers to recognise that REDD will not benefit all forests or countries equally. The impending transition from CDM to REDD in the forestry sector shifts the focus from afforestation and reforestation to management of tropical humid forests, raising concerns about potential funding inequities between humid and dry forests. Additionally, the effects of REDD on forest ecosystems and forest based livelihoods are likely to be both positive and negative. Design of REDD schemes will not always take into account other forest values (e.g., livelihoods support and timber provision) unless provisions are made during the establishment of baselines. REDD could potentially exacerbate existing inequities, keeping the poorest people on the benefit-fringe. For this reason it is important that forest management and governance policies incorporate climate change issues (adaptation and mitigation) and that climate

change policies incorporate sustainable forest management objectives.

A key challenge under any REDD scheme will be the continued demand for food, forest products and biofuels. This could mean that forests excluded from any REDD scheme could come under increased pressure to provide land and timber products (Miles and Kapos 2008).

The primary focus of carbon financing schemes is to offset emissions through forests, not to guarantee livelihoods. Understanding this distinction is important for policy makers keen to jump on the carbon bandwagon. The risks of a singular focus on carbon could easily undermine investment in biodiversity and conservation programs as well as smallholder production forestry that is essential for livelihoods.

Policy makers will need to acknowledge that making REDD work involves understanding a complex value chain comprising governments, local communities, the private sector and donors. The full costs of managing carbon along this value chain must be taken into account, including operational costs, monitoring costs and costs associated with re-tooling institutions. Given the number of potential beneficiaries, the cost of carbon might prove to be higher than currently anticipated.

- and a lack of safety nets outside of natural systems e.g. insurance.

Under these conditions, climate change threatens to undermine the livelihoods of the poor. It will adversely impact forests, water resources, human settlements (including coastal cities) and well-being, increasing vulnerability and reducing resilience. For many countries, climate change will undermine national economic development and the potential to achieve the targets established by the Millennium Development Goals (MDG).

It can be reasonably assumed that direct and indirect impacts of climate change on livelihoods and governments will undermine human security, induce migration and lead to conflict. The vulnerability of people to climate impacts will to a large extent depend on the extent to which their relative dependence on climate sensitive resources, such as forests, for their livelihoods (Barnett and Adger 2007). The vulnerability of communities to climate change cannot be viewed in isolation from issues of poverty and other factors that may determine their adaptation capacity.

The potential for climate change to undermine human security in SSA could conceivably be high because of the dependence of most of the subcontinent's population on climate sensitive resources such as water, forests and agricultural products. For instance, Sub-Saharan African agriculture is 96% rain-fed and highly vulnerable to weather shocks. Additionally, 70% of the rural population of SSA depends directly or indirectly on forests and woodlands for household livelihood resources such as fuel wood and charcoal for energy, food, herbs, tree bark and nutritional supplements, especially vitamin and mineral sources for children (World Bank 2007).

Climate change is likely to alter the temporal and spatial distribution of diseases such as malaria and dengue, potentially increasing the disease burden and child and maternal mortality. The availability

BOX 1: *Possible impacts of climate change*

1. Declining productivity of agricultural land will put pressure on forests for new agricultural land. Net revenues from rainfed agriculture could decline by as much as 50% by 2020.
2. Threats to ecosystems and species increase in coastal forest areas (West Africa) and in the woodlands in east and southern Africa.
3. Water stress and scarcity develop, with consequences for agriculture and economic development.
4. Reduced forest diversity and resilience alters the environmental and livelihood services of forests.
5. Reducing access to, and the quality of, natural resources that are important to sustain livelihoods undermines human security.
6. The kinds of human insecurity that climate change may affect can in turn increase the risk of violent conflict.
7. The capacity of states to act in ways that promote human security and peace is undermined.
8. The direct effects on livelihoods and indirect effects on state functions increase the risk of violent conflict.

Source: IPCC (2007a)

Climate Change Adaptation

The impacts of climate change (see Box 1) are likely to be considerable for SSA. Many countries in SSA are considered to be particularly vulnerable due to:
- a high reliance on natural resources such as forests for economic development and as livelihood safety nets;
- limited ability to adapt financially and institutionally;
- low per capita GDP and high poverty;
- weak institutional and political conditions;

of medicinal plants could also be affected by climate change. The net effect will be a reduced capacity to respond to diseases.

Experience gained from managing SSA's large number of shared river and lake basins could provide a workable framework for implementing climate change adaptation measures, including minimizing potential conflicts. A transboundary approach to water management will not only help minimize the impact of climate change but has the added potential of yielding a peace dividend.

A major challenge for SSA is reducing the vulnerability of climate-sensitive sectors— including forestry, energy and water resources—to current climate variability and "climate-proofing" future development activities. Some countries have responded to climate risks by developing National Adaptation Programmes of Action (NAPAs) through the UNFCCC special assistance to Least Developed Countries (LDC). As of October 2008 the UNFCCC secretariat had received NAPAs from 38 developing countries in SSA (UNFCCC 2008). But few of these adaptation plans and policies incorporate forests, despite clear reasons to do so. Forests play key roles by mitigating extreme climate events like floods, droughts, heat and dust storms. Many socioeconomic sectors and people depend on ecosystem services provided by forests, e.g. hydropower or local communities depending on reliable water quality and quantity. These and other ecosystem services—e.g. watershed protection, timber production and biodiversity conservation— are highly vulnerable to climate change. These forest services can be secured through adaptation approaches such as the conservation and improved management of forests.

Responding to climate change through mitigation and adaptation requires synergies and integrated cross-sectoral approaches; otherwise forests might be excluded from adaptation policies. People's capacity to adapt to adverse climate change impacts is reduced by a complex array of social, economic, environmental and many non-climatic stresses. For adaption to be equitable and effective, policy makers need to understand the multidimensional and differentiated nature of poverty and vulnerability (Tanner and Mitchell 2008a).

Reducing the vulnerability of forests and those elements of society that depend on forests will require both mainstreaming adaptation into forest management so that forest managers consider climate change threats on forests. It will also demand mainstreaming forests into adaptation so that non-forest sectors consider improved forest management as adaptation measures.

Governance

Halting deforestation and degradation while simultaneously improving livelihoods requires making hard choices. These choices involve issues such as access to forest resources, equity, benefit sharing and the rights of indigenous peoples and communities. Consideration will have to be given to the appropriate role and capacity of traditional knowledge and community based forest and resource management organizations as climate change impacts land use options and forests.

One of the biggest forest policy challenges is that of governance, specifically tenure. The tenure disconnect has compromised development in many African countries over decades and could undermine implementation of REDD. REDD may not succeed if the underlying causes of deforestation and poor governance—corruption, tenurial insecurity, multi-layered tenure regimes, illegal logging—are not adequately addressed. Lack of clear tenurial arrangements can fuel local conflicts and constrain climate adaptation and benefits distribution efforts.

As the impacts of climate change take effect, the tenure forms existing today are likely to be altered in unanticipated ways. For example, areas currently designated as protected forests may in fact revert to non-forest land, requiring rethinking land-use patterns and tenure. Policy makers will need to monitor the implications of climate change induced land-use changes on tenure regimes and rights holders.

A recent study by the Rights and Resources Group found that, while challenges remain, the decades-old global trend of transferring forests from government to local ownership has continued. The report also found that the area of forest under management of local communities, indigenous groups, private companies and individuals has increased (Sunderlin et al. 2008). If these rights are fully realized in practice, the trends reported above are encouraging and present an additional policy challenge for REDD activities. Many NGOs are concerned that the benefits and costs of REDD-related activities will not be shared equitably with indigenous peoples and local communities, groups that currently contribute to the conservation and management of carbon rich ecosystems including forests. Indigenous peoples and local communities will most likely have to form legally recognised institutions so that any funds that they might earn from incentive schemes can be paid to them.

An additional policy concern regarding equity is the inevitable elite capture of revenue within countries and communities that could result from a sudden increase in financial support for REDD activities either through market-based mechanisms or through public funding. Minimizing elite capture requires strengthening of local institutions

so that any increase in the value of forests arising from carbon trading is equitably and legitimately distributed (Luttrell et al. 2007).

Debates on the impacts of climate change often argue that it is the poor who are most vulnerable. While this is generally true, it is important to understand that poverty affects people differently. This means that the vulnerability of poor people to climate change will also vary. Clear understanding of the links between poverty and vulnerability can help design relevant responses to climate change. This calls for an approach that closely examines the geographical and asset context of vulnerable communities and how household vulnerability varies within these locations (Tanner and Mitchell 2008b). Understanding the context of vulnerability is not an academic exercise. It can mean choosing between advocacy and technical responses to adaptation. For example, if justice and equity are key considerations, then the response is often raising funds for advocacy rather than for research and technology (*Ibid.*).

Expanding the role of individuals and companies in the growing, protection and management of forest and trees requires secure tenure and institutional arrangements that guarantee inclusion by those investing in these efforts (FAO 2003). However, carbon forestry is not the same as in community forestry, and at the national level, the ownership rights of forests for carbon reductions are not clear, creating uncertainty among producers and buyers of carbon (Luttrell et al. 2007).

Globalization

The globalization paradigm has gained much currency in the past 10-15 years in the context of economic, environmental, community and technological phenomena. While global change has brought real benefits to SSA in the form of greater productivity, increased trade, improved communication and a more informed and questioning society, millions of the region's people remain mired in poverty. Unless countries understand the "rules of the game," the globalized economy poses many risks, especially for economically weak countries and the poorest people within them. Hence globalization cannot be unqualified and unrestricted. Mechanisms to protect poorer countries and the poor within them against negative impacts must be built into globalization processes.

Historically, globalization has been linked to the failure of environmental management policies in many developing countries. The globalization of certain macro-economic policies was achieved through structural adjustment programs (SAPs) and Poverty Reduction Strategy Papers (PRSPs). The World Bank and the International Monetary Fund (IMF) used SAPs as part of the conditions for developing country governments to secure loans. The SAPs were criticised for undermining economic development and for explicitly excluding the environment in their design (Khor 2005). While being silent on the environment, SAPs were blamed for unprecedented natural resource extraction for export and undermining the interests of resource dependent communities.

The discourse on the implementation of REDD projects and carbon trading is global in nature for many reasons, including the commitments made under the UNFCCC, the growth of the carbon market and proposed funding mechanisms for carbon trading. However, REDD implementation requires national action and regulation. This means that in responding to global climate change, the issues of equity and responsibility between developed and developing countries need to be addressed within the context of the principle of "common but differentiated action."

The process of globalization means that most impacts on forests will be driven by factors outside the sector, and consequently the ability of governments to influence them will often be limited. Global forest trends and decisions made in far flung places impact how forests are managed at the national and local levels. Even in those cases where the possibilities to influence do exist, many developing country governments lack the capacity to monitor global trends in forest products or decisions made at international fora that impact national level priorities and policies.

Physical distance has become less important under globalization. The growing demand for timber in countries such as China and India is having a major impact on forestry practices in countries such as Gabon, Equatorial Guinea, Cameroon and the DRC. China's trade with Africa has grown as demand for imports has risen to fuel the rapidly expanding manufacturing sector; China has recently surpassed Britain to become Africa's third biggest trading partner behind the U.S. and France (Canby et al. 2008). However, the global financial crisis might dampen China's appetite for wood. An estimated 60% of wood imports are re-exported and with demand in Europe and North America declining due to a global recession, China might reduce its imports of timber from Africa and other parts of the world.

With multiple drivers of change and interested actors both within and outside the forestry sector, predicting impact pathways is difficult (Nair 2005). New partnerships and alliances in varying configurations (between governments, the private sector and communities) are constantly emerging and influencing how forests are managed based on negotiations and joint actions that could undermine local interests in the forest. Whether these new partnerships and alliances can reduce deforestation

is not clear. Such a dynamic and fluid situation could make coordination of REDD projects more challenging and attribution of impacts (carbon reduction) to a particular alliance or partnership equally difficult.

Globalization also brings into sharp focus the competition between "globalism" and "localism." This is manifested in the implementation plan of REDD which addresses the principle that developed countries should assume greater responsibility for GHG mitigation than their developing counterparts. This risks the possibility that local adaptation needs are subjugated to global concerns. Forest areas identified as a priority for tackling deforestation to reduce emissions (for the global benefit) may not always reflect local or national forest values (e.g., conservation, livelihoods support, or culture). Similarly, some forest areas and hence management objectives may be less valuable from a carbon perspective but of high priority for other reasons. The challenge is to ensure that these competing values get equal recognition and funding under a shared global responsibility in responding to climate change.

If SSA is to make any meaningful progress in meeting its development objectives, it must address its energy poverty. It has diverse and abundant energy sources that are underdeveloped and poorly utilized. Unstable fuel prices, aspirations of fuel self sufficiency (especially for non-oil producing and landlocked countries), concerns over global warming and worldwide energy use have been stimuli for many countries to look into developing alternative energy sources including biofuels from palm oil and jatropha. Failure to address energy poverty will increase pressure on the forests and woodlands that are a primary source of energy for an estimated 575 million people (Cotula et al. 2008).

Biofuel development could have positive impacts on remaining forests and forest dependent people if developed on degraded forest lands in a manner that supports income generation from smallholder producers and takes into account environmental conservation concerns. But there are debates about the pros and cons of commercial biofuel production. Where there are competing land uses with no security of land tenure, the expansion of commercial biofuel production can marginalize poor local resource users, denying them access to land and resources that are essential for their nutritional, health, cultural and economic well-being (*Ibid.*)

Any rapid expansion of biofuel plantations should be of concern to policy makers for several reasons. First, the demand for land is likely to cause governments to enter into agreements with private investors—resulting in land "give-aways"—without adequately protecting the interests of local people or minimizing ecological damage. Such land

grabs could reverse progress that has been made towards securing community forest rights. Second, unsustainable biofuel polices can lead to large scale forest conversion as is the case in the DRC. Having identified biofuel production as a priority for industrialization, the Congolese government is reported to have awarded a Chinese company the right to develop a 3 million hectare oil palm plantation (Biopact 2007). Third, biofuel polices need to be developed in concert with policy makers in other sectors, especially agriculture, energy and macro-economics.

Conclusion

The key forest policy challenges that will face countries in SSA include:

1. *Transforming forestry organizations*: The policy context and content for sustainable forest management has become more complex, requiring fresh approaches, innovative institutional arrangements and new skills. Procedures and legislation developed in response to past demands for forest goods and services and contexts might have to be reviewed and refined in response to the climate change agenda. In many countries national forestry institutions involved in research, extension, administration and education have not kept pace with rapid changes in the sector after colonialism. Issues such as decentralization of forest management, increasing numbers of tradeoffs that need to be considered when allocating forest resources, the emergence of new market opportunities for forest goods and services and the changing role of the private sector are often inadequately addressed. In this context, planning and coordination are weak. As a result, the full potential and opportunities of forests to enhance human well-being and the environment remain unexploited, while key issues with large impact potential such as climate change are not being tackled.

2. *Mainstreaming adaptation into forest management and forests into management plans:* IPCC assessments place Africa as a priority for adaptation assistance due to Africa's large share of the world's drylands, the high number of least developed countries, fragile resources, variable climates, relatively weak institutions and low human capacity for managing the multiple stresses related to climate change vulnerability (IPCC 2007b).

3. *Promoting a sub-regional approach for engagement in UNFCCC processes:* SSA has a number of sub-regional economic

groupings that can provide a basis for developing common visions and a greater voice in international negotiations to overcome the diverse economic, social, ecological and cultural values. The Central African Forest Commission (COMIFAC) is a good example. Another example is provided by the Common Market for East and Southern Africa (COMESA) which has argued for greater attention to be given to the carbon markets for dry forest ecosystems.

4. *Reducing vulnerability and emissions through a regional response:* Urgent steps must be taken to develop adaptation plans within the context of transboundary resource management cooperation such as management of shared river basins and forests. Such an approach will go some way to limit transboundary climate change impacts. In addition, such an approach can yield a peace dividend in the event of serious resource conflicts. Furthermore, countries should consider the possibility of using similar methodologies for determining emission levels and explore how regional cooperation can contribute to reducing regional displacement of emissions.

5. *Clarifying rights and ownership:* The question of who will own carbon reductions is still to be resolved. This issue is complicated by the fact that along the impact pathway there are likely to be many players contributing to the carbon reductions. Without clarity over the right to benefit from carbon it is difficult to know at what level decision making over benefit sharing will take place. In particular what will the role of the government be?

6. *Understanding globalization:* Climate change is a global issue that presents opportunities and risks for new forms of financing to forest dependent communities. Understanding the emerging arrangements and procedures is essential for effective participation in international negotiations and in the equitable distribution of the benefits between countries and within country.

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Chapter Two
Optimizing forest government and governance in Europe: Defining forest policy with national tradition or European Union "modernization"

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Abstract

Since 1990, when Eastern Europe began the transition toward democracy and a market economy, integration of the European Union has strengthened. This has caused both problems and opportunities for the forestry sector, resulting in two types of responses in forest policy. In the first case, in the emerging democracies, the classic instruments of forest government—the rule of law, private ownership and markets for forestry—were instituted or rebuilt. With respect to these reforms, implementation is the major problem today. In the second response, forest governance—cooperative forest policy-making with self-organizing networks of participants from policy, economy and society—was introduced through National Forest Programs or the forest strategy of the European Union. This paper examines relevant policy-making theory, network analysis and case studies in order to demonstrate that this new forest governance offers opportunities for mutual learning, but that the results are also determined by power processes. By showing how power is distributed, network analysis provides useful information in the decision whether to join a specific network. Enhanced forest governance could be a new task for a "facilitating state forest administration." Whether the state forest service should jump into this new role depends on its ability to become a trusted mediator among all stakeholders in the forests. In conclusion, to develop a strong forest policy it is recommended not simply to follow the EU modern forest governance policy blindly but also to rely on traditional national government instruments and to actively make use of the governance instruments in selected cases only.

1. European forest policy crossing borders

Europe has approximately 1000 million ha of forests which play an essential role in the lives of Europeans (Ministerial Conference on the Protection of Forests in Europe Liaison Unit Vienna 2003). The forests have multiple uses, and both wood and non-wood products supply 500 million inhabitants as well as a growing worldwide export market. Creating a comprehensive and unified European forest policy is an ambitious project since in reality the forests of Europe are divided into more than 40 national policies based on sovereign states. In a certain sense, political borders cut the European forest policy into 40 policy pieces.

Although national borders remain fundamental realities in Europe, the project of integrating Europe is a vision of creating a more open social and economic space. Widening and deepening the European Union has broken down many borders in recent decades. For Europe's forests, change has

also been driven strongly by cross-border trends and activities.

On the ecological level, the diffusion of pollutants and nutrients in air and water has not stopped at borders. Plants and animals have spread all over Europe, and the exchange of products by cross-border transport technologies has also had major impacts. When considering the consequences of climatic change, it is clear that cross-border effects have changed the ecological conditions for forests throughout Europe.

The emerging markets in Europe have created strong and accelerating pressures for change. Easy access to cheap wood and labor has provided an incentive for forest-based industries to relocate to Eastern Europe. In Central and Western Europe, the markets have forced the foresters on the wood supply side to cope with new competition from Eastern European forests. In highly developed national economies, sinking wood prices and higher labor costs have changed the economic parameters for forestry dramatically. In order to survive in these markets, structural reforms of forest production in state and private enterprises have been inevitable.

On the social level, many citizens in European nations still think of members of other states as foreigners who should not have the same rights as residents. As a result, when employment or salaries drop, conflict between nationalities emerges, and border tightening is demanded by citizens. In general, national agendas dominate and hinder outside impacts on "national" forests; however, some environmental values regarding the forest have gained influence because of cross-border activities (Schmithüsen 2004). Under the umbrella of sustainability, new demands for environmental and nature conservation standards have emerged. These demands for non-wood ecosystem services have diminished the options for economically profitable wood production.

This snapshot shows that key issues for national forests like guaranteeing ecological health, maintaining economically profitable wood production or serving the new demands for non-wood products are driven by cross-border impacts from both the European and the global contexts. The cross-border effects are one reason why a unified EU forest policy could produce added value to national forest policies. The question is how such an EU forest policy relates to national forest policies. Further questions to be asked are why EU forest policy can claim to be "modern," and how and why it is accepted by member states.

The answer given in this paper is based on the interest and power model of forest policy (Krott 2005). The assumption is that the specific forest policy of the EU can be explained by the interests of stakeholders and their respective power. The analysis focuses on the changes in forest policy-making at the national and international levels in Europe during the last two decades. By then applying concepts of governance and government, a theoretical basis is identified which is able to explain the new developments. Finally, conclusions are drawn as to how a proactive forest policy can cope with these challenges. The analysis is based on literature and on two theoretical and empirical studies about networks and state forest institutions by the author and his team (Hasanagas 2004, Krott and Stevanov 2004).

2. National and international responses of forest policy

In the past two decades, forest policy makers adapted to the emerging challenges for forestry by initiating numerous activities on national and international level. In all European countries forest policy makers reformulated forest law and initiated a rather deep reform of the state forest services. Private forest ownership was re-established throughout countries in structural transition. Furthermore, sustainable forest management certification spread in European countries and National Forest Programs were initiated (European Commission 1999; Indufor et al 2003, Rametsteiner 2000).

On the international level, the Ministerial Conference for the Protection of Forests in Europe (MCPFE), involving more than 40 countries including the Russian Federation, was established in 1990. The main task was to develop a common understanding for the protection and sustainable management of European forests. In contrast to this forest-focused international body, the European Union (EU) does not have an explicit mandate to formulate forestry policy. Nonetheless, it influences forestry strongly with policies in agriculture, rural development, nature conservation and the environment. Additionally, the EU formulated a forestry strategy in 1998 which was renewed as EU Forest Action Plan in 2006 for a planning period until 2011 (Council of the European Union 2006). As follow up to the United Nations Conference on Environment and Development in 1992, the forest also became subject of global initiatives which were strongly reflected by the MCPFE and the EU (Hofmann 2002).

This rather confusing bundle of new national and international forest policy initiatives can be structured along two different types of policy-making (Benz 2004). Important forestry issues are handled by the state through a policy process that creates regulatory programs and implements them through semi-compulsory means (Krott 2005). The regulation of conflict is managed by the state with its authority to implement binding solutions for

all forest users e.g. formulating and implementing the new forest law. This process is the heart of "traditional" forest government.

A growing number of forest policy instruments do not fit into this concept anymore because they go beyond the domain of a single state authority. A National Forest Program is policy making for sustainably managed forests through broad partnership between government and non-government organizations (Glück et al. 1999). Broad participation is essential, meaning that the state becomes just one partner in the network, and solutions must be based on broad bargaining instead of on state power only. Such loss of power by an individual state also happens on the international level because there is no "state of Europe" and consensus among the partners, which are sovereign states, is necessary e.g. within the MCPFF. By virtue of these distinctive features—networks and bargaining among partners from state, economy and society—the new forest policy initiatives follow a policy-making type which can be better described through concepts of governance which differ from state-centered government processes.

Forest government and forest governance are found on different levels of forest policy in different proportions (see Table 1). In forestry at the national level, traditional forest government dominates; however, a few forest governance processes were initiated, mainly National Forest Programs, Certification and integration with rural development. At the international level, only governance among sovereign nations is possible. A striking exception is the EU. Based on the treaty between the member states, the EU has a mandate to use government instruments which are binding for the member states. However, the power of the EU is rather limited; therefore it introduces a number of governance instruments, especially in the case of forestry.

The distinction between government and governance becomes meaningful in analyzing forest policy because the two concepts differ significantly with respect to the political dynamics of their respective instruments. Understanding the difference also facilitates choosing political theories that are appropriate for describing and explaining forest policy and, finally, results in useful recommendations for the practice. The following sections seek to do this, focusing on theories of administrative policy-making and networks.

3. Forest government in European countries

3.1 Rebuilding rule of law, private ownership and markets in forestry

The transition of the communist centrally-planned states into democracies and market economies was the most significant development in forest government. The countries in transition strongly based the design of their government instruments on the model provided by Western countries. When the formerly communist countries were accepted into the EU, the requirements of membership gave strong additional impetus to adapt their policies.

As a result of the last two decades of policy development, forest and forest related environmental laws in all European countries share quite similar ecological and economic standards of sustainable forest management. But the unified legal basis means different things for the government process in old and young democracies. In the old democracies, due to pluralistic balance-of-power systems, laws had little room to change; by adjusting implementation, state and private institutions were able to move forward with new trends in ecology and economy. For example, important ecological standards far beyond the requirements of law have

Table 1: Forest Government and Forest Governance in Europe. *Estimated volume of activities in % 2000-2008

Level of forest policy	State authority	Type of forest policy *	
		Government	Governance
National forest policies	Full	90	10
EU forest-related activities	Partly	80	20
International forest activities	None	0	100

been embraced by state owners and a group of environmental oriented private owners (Schraml et al 2003). With regard to economic innovation, private owners and some state owned enterprises have started to shift forest management toward higher profitability well beyond the incentives created by policy (Österreischische Bundesforste 2001).

In the new democracies, the process is quite the reverse. New legal standards for sustainable forest management and privatization were formulated rapidly during the transition period, but implementation lags far behind the law (European Commission 1999, Indufor OY et al. 2003). Restitution and re-privatization has produced a large number of small private woodlots, whose owners often lack skills and capacity for forest management. They often cannot fulfill their roles as private owner and active participant in forestry markets. Forest policy lacks the strength to provide them with sufficient extension service and financial incentives which could help private forest owners become the strong and responsible actors in sustainable forest management expected by the concept of private ownership.

Furthermore, the overall enforcement of the rule of the law lags far behind legal requirements. "Black" and "gray" markets for wood as well as for labor in timber harvesting and transport are widespread problems in the young democracies (Indufor OY et al 2003). The illegal activities are evidence that these countries are struggling to provide the government framework which is a basic presupposition for the development of strong markets.

The widespread implementation problems in the young democracies should not be misunderstood as major failures of the national forest policies. The opposite is true; the deficits are the consequences of very progressive, innovative and quickly formulated new forest related laws with high standards. But they show where the challenges for forest government lie in the young democracies today. Positive impacts for sustainably managed forests can be achieved if the traditional government instruments of monitoring, extension and financial incentives are strengthened in the implementation.

The outcome for the old democracies is different because in their cases the law has fallen behind innovative practices. The challenge for government forest institutions is to reformulate the regulatory instruments faster in order to keep up with the innovations of the sector. For example, ecology has not yet been sufficiently included in forest planning and financial incentives under forest government to provide room for the emerging issues of forest biodiversity. Another example is climate change and carbon sinks in forests: specific forest government instruments have not yet been formulated.

International regimes like the MCPFE and other international conventions that impact forests can trigger the formulation of innovative national government instruments, but they cannot change them directly. It requires joint efforts from the entire forest sector and the skillful use of national "windows of opportunities" to reform the legal basis of specific forest policy instruments. These cross-border pressures have not replaced the national forest government process but have opened up new challenges for it (Hogl 2000).

Figure 1: Benchmarking the state forest administration (SFA) forest policy goals on state and private forest land. Source: Krott, M., Stevanov M. 2004; Krott, M., Sutter, M. 2003.
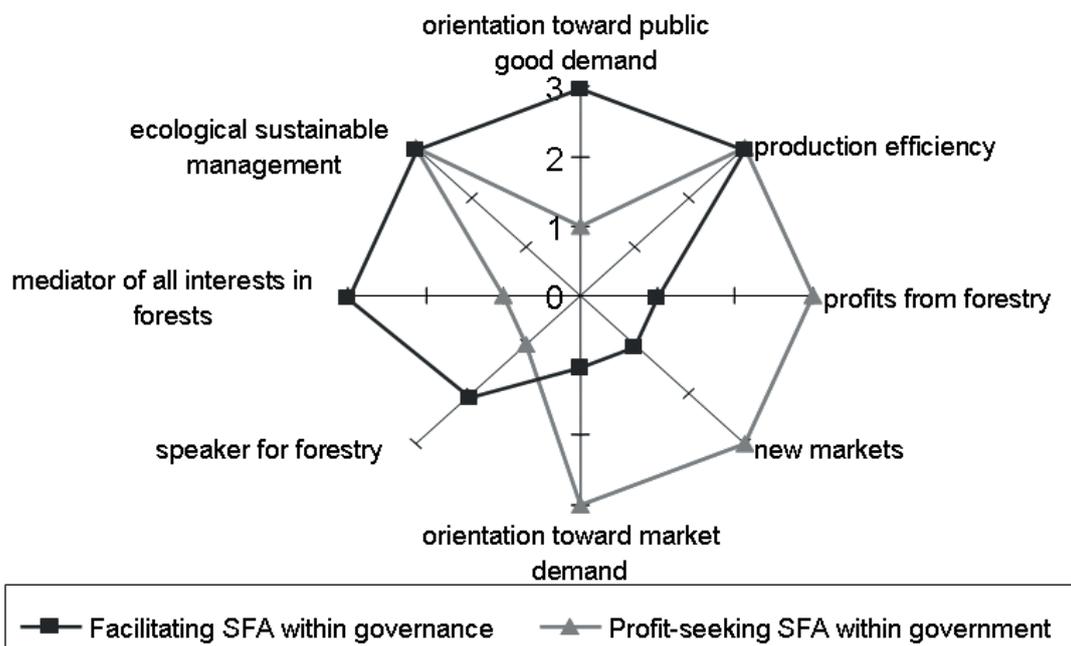
3.2 Economic streamlining of the forest administration

The state forest administration plays an important role in the formulation and state-wide implementation of forest policy. It is also a major economic actor by managing the state owned forests. The organization of the state forest administration varies among European countries. Management and policy tasks can be handled by one integrated state institution—as in the majority of countries in transition—or by two or more different state institutions that the economic-driven reform has newly created in some countries.

Defining the overall outputs of the state forest administration is important for optimizing the internal organization (Krott and Sutter 2003, Krott and Stevanov 2004). In all European states, forest policy formulates goals which can be used as benchmarks for the state forest service (see Figure 1). Ecologically sustainable management is an accepted principle in all European states and is expected to be supported by the policy activities of the state forest service and by the management of the state land. There is also consensus that multiple-use forestry should produce marketable products like wood as well as public goods such as recreation or biodiversity. Improving economic strength can be done by increasing cost efficiency, maximizing profits and developing new markets. Finally, in the political arena, there is a role for the state forest administration to be a speaker for forestry in national policy settings and to act as a mediator and fair broker between the diverse interests in the forest that range from wood production to nature conservation.

With respect to the rather small economic potential of forestry, the state forest services are huge institutions in Europe. In the old democracies, the state expanded its administration during the economically prosperous 1960s and 1970s in order to offer private forest owners a powerful extension service and to serve the general population by providing recreation and nature protection facilities. The young democracies inherited from their centrally-planned communist systems a well developed state forest administration which was directly managing the entire forests of the states.

Today, in contrast to the prosperous past, the driving force of reforming the state forest administration is the lack of financial means for the state institution. In the old democracies, the fiscal pressure of the state results in diminishing financial means needed to cover the deficits of the state forest administration. In the young democracies, the state budgets lack the strength to cover any deficit of the state forest administration; expectations and political pressures are high to generate financial revenue from the management of the state forests to contribute back to the general budgets. At best,

the state forest administration gains a more or less autonomous financial status (Krott 2001).

The reforms mean that the state forest administrations must switch to a model of "profit-seeking state forest administration." As a result, the market orientation of wood production turns increasingly towards maximizing profits. In addition, new markets are expected to finance the public services of recreation, nature conservation and environment. Simultaneously, the pressure to lower costs reduces public goods and services to a minimum standard. Ecologically sustainable management is still expected, but pressure for cost efficiency forces silviculture management into a "mission impossible"—to be highly efficient in the short run and simultaneously follow long term ecological standards.

The reforms also have consequences for the policy role of the state forest administration. Public funds are saved by shrinking the state administration, which in turn reduces activities in monitoring, planning and extension. The market becomes the trusted regulatory force: private forest owners and industry acquire more freedom to run forestry according to their own interests.

The model of "profit-seeking state forest administration" fits very well into the overall change of the role of public administration within the government process (Jann 2002). The state seeks to diminish the financial burden of a large administration by limiting the direct and free supply of public goods and services. A slim state administration should guarantee at minimum that additional demands will be served by private economy and society.

The change into a profit-seeking state forest administration has already and will in the future change the way forestry is managed in the European countries. By reducing the tasks of the state, the slim forest government concept leaves forestry to the demands of markets to a greater degree. Two consequences are politically most important. Firstly, shrinking the forest government gives a rather vague answer as to how to serve the public demands which cannot be organized into markets, such as many environmental and recreation needs. Secondly, sooner or later the shrinking forest government will reach the point when the state forest service becomes too slim to be able to monitor and guide the implementation of forest policy in a proper way. Consequently, the standards of forest law will either lose their impact on forest practice or other public administrations will take over the task of guaranteeing the sustainability of forests.

4. Forest governance on a national and international level

4.1 Success within forest governance processes

In the last decade, the policy alternatives to forest government have increased, resulting in the concept of forest governance. The key elements of the forest governance concept are shown in Figure 2. The first pillar symbolizes the state-driven government process aimed at the formulation and implementation of political solutions for the forest (Krott 2005). In addition to government, society and economy also produce rules guiding the use of the forest. The dominant stakeholders in society are non-profit organizations and associations. In the economic system, private enterprise dominates the markets. Whereas in the government concept all three systems—policy, society and economy—develop autonomous solutions for the forest, in the governance concept the interdependence between policy, society and economy becomes the central process for seeking solutions for forestry problems (Rhodes 1996).

Forest governance is forest policy-making as a social bargaining process for regulating conflicts of interests in forests within a self-organizing network of public and/or private members without formal dominance of the state. The promise of governance is that networks can be built up around specific problems, organizing members from different sectors with specific resources, competencies, interests, responsibilities and means to solve problems of forestry. The open communication steers policy learning, improving the mutual understanding and triggering new solutions (Shannon and Schmidt 2002). If the willingness to learn is insufficient or win-win solutions are not at hand, the networks offer options for negotiations, paving the way for compromises among the participants.

The National Forest Programs are important initiatives for developing forest governance strategies in many European countries (Rayner and Howlett 2004). Since 1992, 12 European countries have started National Forest Programs. The programs are expected to develop improved solutions for sustainably managing forests based on the principles of broad participation, collaboration and a holistic, intersectoral approach (Humphreys 2004). In the National Forest Programs, creating an institutional platform for a long-term process which develops iterative adaptive solutions for sustainable forest management is as important as implementing a

Figure 2: Elements of government and governance in forestry
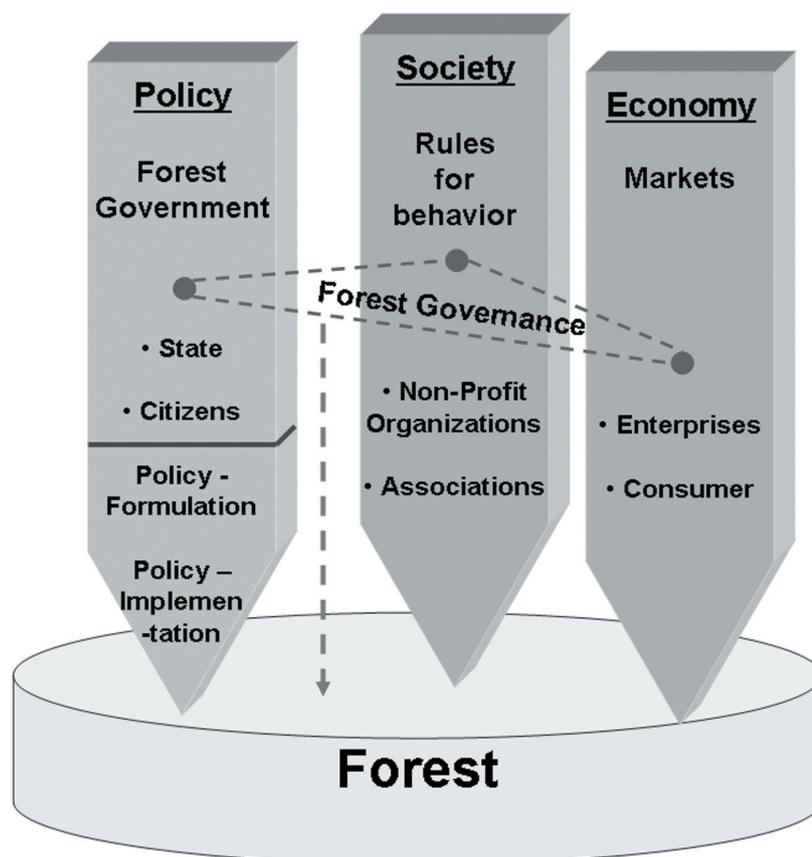
specific plan of action (Schanz 2002). To date, 12 countries with National Forest Programs, including Czech Republic, Finland, Denmark, Belgium and Germany, have implemented National Forest Programs. They operate with a philosophy of state-regulated self-regulation, which means that the state remains the most important player in guiding the process. On the other hand, countries like Netherlands, Portugal, Sweden and United Kingdom did not establish National Forest Programs *per se*, but developed networks of private self-regulation of specific forestry issues like certification; in these countries, the driving factors are private actors with a high capacity to act.

The diverse nature of National Forest Programs demonstrates that forest governance involves not only optimally networking stakeholders through communication with the common goal of sustainably managed forests; it is also a process driven by power. The process and the outcome depend highly on the distribution of power and information within the networks. Consequently, for a specific forest institution, the challenge of governance is to identify the patterns of power and information which are relevant for a specific governance instrument. Based on this knowledge, proactive participation can lead to success, but in other cases it might also be rational to resist participating and to save resources for alternative activities.

Alternate strategies for acting within a network were analyzed by a recent case study of 12 networks comprising 234 state and private actors in Finland, Germany, Greece, UK, Sweden, Spain, Ireland and Denmark (Hasanagas 2004). The analysis model explains that success within a network is based on two sets of variables: network conditions and actor-related means. The theoretical explanations are based on statistically tested data produced by a telephone survey in eight European countries. The results can be illustrated by an example focusing on cross-sectorality as a major goal of networking. In principle, a specific actor can use information, financial means or pressure for surmounting the borders between sectors (Krott, Hasanagas 2005).

In networks which are dominated by state agencies and which are strongly formalized, information or pressure is seldom sufficient to build new linkages between sectors (See Table 2). Within this discourse, new arguments from private actors are selectively used by the state agencies to support their programs. Even scientific proofs cannot influence the dominant formal arguments of the state agency. Additionally, the pressure of private actors is not strong enough to achieve an impact. The only effective means is to use financial incentives. Paradoxically, in the opposite setting, networks that have low state influence and low formalization do not offer good chances for effective arguments in the discourse either. In such networks, the whole structure is too flexible to pin down commitments for a joint cross-sector project. This flexibility also means that participants can easily escape pressure. Nonetheless, financial incentives can again be sufficient to attract partners.

Networks with low state influence and high formalization offer the best setting for building bridges across sectors by means of information, financial means and pressure. Such networks, described as social corporatism (Jordan, Schubert 1992), enable associational arrangements and spontaneous cooperation. They follow voluntary political and social procedures which involve the participants in cross-sectoral formulation and implementation of joint solutions. The example proves that specific network factors do decide whether and how integrative solutions can be achieved. This supports the conclusion that in some settings only forest governance will improve the situation for the forest partners. In other settings, governance instruments will weaken the position of forestry because certain participants will dominate

Table 2: Means for cross-sector linkages

Actor related means			Network factors	
Use of information	Use of pressure	Use of incentives	State importance	Formalization degree
👎	👎	👍	High	High
👎	👎	👍	Low	Low
👍	👍	👍	Low	High

Legend: 👎 incompatible; 👍 effective
Source: Krott, M., Hasanagas, N. D. 2005

the results. Network analysis can help identify in advance the most promising networks.

4.2 New role for a "facilitating state forest administration"

The different—but still important—role of the state within the governance model also means a new challenge for the state forest administration (Jann and Wegrich 2004). In practice, governance needs a mediator who supports the build-up of a well balanced network of partners and is able to follow some procedures. In absence of network rules and mediation, the stronger participants would easily misuse the arrangement to legitimize their programs only.

Basically, the role of a mediator fits the state. The state forest administration could take this position if it leaves its role as speaker of a forest sector narrowly focused on wood production and opens up to all stake-holders interested in the use and protection of the forest. The mediator must win the trust of all participants by acting unbiased. The guiding principle is to enable a sustainable multiple-use of the forest by organizing a well balanced governance process in joint search for solutions. The process as such is already a public good and the results are expected to complement the market-driven forest use in the cases in which deficits from the point of view of public goods became apparent.

The task of governance is to facilitate a process where society and enterprises participate in joint efforts to support sustained forests. It requires the state forest administration to change from a profit-driven to a facilitating type of public administration. Figure 2 demonstrates the essential differences between the two types. The orientation toward market demands will diminish and the orientation toward public-good demand and a role of mediator will strengthen. The goal for efficiency will remain high because the new role should also be fulfilled with minimum costs. Throughout European countries, the state forest administrations have the best opportunity to be the most efficient facilitating public administrations because of their widespread capacities throughout the region, their competence, and their experiences in managing state-owned forests (Krott 2001). The most difficult task is to be unbiased and acceptable brokers for all participants interested in forests. If the state forest administrations fail to fulfill the requirements of governance, other public administrations will take the lead in forest governance. The outcome would be that the forestry will be restricted to market-based wood production and the multiple-use issues of the forest will be taken over by environmental institutions.

5. Forest government and governance in the EU

In 2001 the EU published the White Paper on European Governance (European Commission 2001). The governance strategy is aimed at healing the paradox that people all over Europe have: they see growing problems and expect solutions from policy, but they simultaneously distrust all political institutions especially the EU. Involving people, the state and private institutions in joint development of solutions should increase the acceptance of the EU. The governance approach has not yet changed the key elements of EU policy, which is government by binding solutions based on the Treaty, but governance adds elements of communication and decision-making via networks to EU activities (Heritier 2001). Combining governance with government means that the participants from policy, economy and society do have a chance to find joint solutions, but if they fail the EU will go forward with classic government actions. In practice, governance is done in the shadow of the state-driven government. Governance often either becomes the first stage in a process which continues in traditional legislation, or governance simply supports the implementation of existing laws. In both cases, classic government remains the stronger element of EU policy-making. To date, the EU is still far from becoming a "confederation of learning networks."

The dominance of government and the specific but limited role of governance are of high relevance for forest policy on EU level. Based on the Treaty, the EU has no mandate for an EU forest policy. This gap in EU policy means not freedom for autonomous national forest policies but rather the opposite. The national forest policies are highly influenced by numerous EU policies which have side effects on forests and the international markets supported by the EU become driving forces for changing the forest sector.

Most important to forestry are the growing demands of the EU environmental policy, e.g. the Birds Directive, Habitats Directive, Water Framework Directive and measures for meeting the Kyoto targets by forest related sinks. Of the same relevance is EU rural development policy in which forestry is one integrated part of rural development (Flies 2004). Most financial incentives for forestry are provided by the EU within the framework of regional development, meaning that specific forest sector needs lose relevance. The forest policy role in EU environmental and rural development policy is weak due to the lack of an EU forest policy which could balance the prominent position of other sectors on EU level.

At the moment, the only vehicle for EU forest policy is forest governance. The EU focuses on governance in the EU Forest Action Plan 2007–2011. A key element of the strategy is better communication in order to improve coordination and cooperation in all policy areas relevant to the forest sector. The National Forest Programs are the most prominent new instruments to organize the implementation of international commitments. As discussed, proactive forest governance could strengthen forestry, but governance is by no means a guarantee that forestry interests will hold their position against growing demands from other participants in the new networks. Of bigger concern for forest policy is that even if forestry is successful in the communication networks, these governance instruments cannot go beyond the limits drawn by EU environmental or rural development policy.

A promising strategy for strengthening forest governance is to focus on international markets. Because EU government is strongly oriented towards supporting markets, a market-driven governance strategy will find a positive response from EU institutions and policies. The vision 2030 "Innovative and Sustainable Use of Forest Resources" formulated by the Forest-Based Sector Technology Platform in February 2005 wants to enlarge the role of the forest-based sector in Europe (Forest-Based Sector Technology Platform 2005). An innovative forest-based sector could contribute significantly to the sustainable development of a globally competitive EU. The initiative would be driven by representatives of the forestry industry, private forest owners and science. The basic idea is the "transition of the sector from being largely resource driven to being market and knowledge driven" (*Ibid.*). Due to the strength of the participants and market orientation, the platform could seed a powerful forest governance process.

The platform is a good example of how governance in connection with government can have an impact on forest policy. It opens up a window for all stakeholders interested in strengthening the market-oriented profitable use of forests in Europe. This initiative would find support in the important government task of the EU of strengthening European-wide markets. Within such a framework, the interests for market-driven forestry will grow stronger, whereas the interests in public goods from forests as environmental, recreation and cultural benefits remain limited. Such a setting of interests within a governance process has a significant potential to shift the priorities for the multiple-use of European forests under the umbrella of sustainable development.

6. Labeling EU forest policy as "modernization"

EU government and governance instruments claim to address problems better than purely national forest policies. They argue that cooperation and coordination within the EU will produce added value. Joint activities gain a better understanding of the cross-border processes driving forestry: they accumulate knowledge and experiences and generate innovative solutions. The EU presents modern solutions superior to national forest policy, which is limited by tradition, by strengthening new governance processes in forestry (Hogl et al 2008) and encouraging technological innovation. Why is the EU claim—that it is modern and innovative—widely accepted despite the common negative image of the EU as "bureaucratic institution" far removed from the needs of the citizen?

The reasons are partly because of the EU information process and partly a result of power strategies. On the information level, there are good arguments that a community of 500 million people has a greater potential for generating innovative ideas than a single member country, and 1000 million hectares of forests provide a significant incentive for problem solving. More important than these informational or technical arguments are the power strategies. For all EU institutions, it is essential that they claim to be better than the national institutions. Being better, i.e. modern, legitimizes the EU and its institutions. It is unthinkable for the EU to admit that member states might know a policy field better and simultaneously argue that the EU should be more active in that field.

As important as the argument of superiority of EU institutions is the informal power strategy of member states. Stakeholders in a member state can use the EU as an influential support policy that faces resistance within their own country. In this case they promote modern EU forest policy just to change national forest polices in a direction they prefer. For example, for environmental groups it is easier to demand protected forest areas using modern EU concepts of biodiversity and European heritage than to demand protecting areas using only national arguments.

Furthermore, member states compete in influencing EU institutions to formulate policies which are in line with their respective national interests and thus promote them as modern and optimal solutions for all EU countries (Jordan 2005 p. 1). For example, in Finland, its National Forest Program is well-suited to the local policy style and forest policy framework, which are dominated by the forest and wood-based industry sector. Therefore Finland promotes National Forest

Programs as modern instruments of forest policy and necessary part of the EU forest strategy. In this way, the instrument preferred by a particular member state is endorsed by the EU as the modern instrument which each member state should use.

In summary, it is an advantage for both EU institutions as well as certain powerful national stakeholders to label EU policy as modern. Therefore, EU forest policy solutions—especially governance instruments in forestry—are claimed to be innovative and superior much more often than is justified. In conclusion, the dominance of national forest policies within Europe does not mean that traditional forest policy is outdated. It shows only that the golden shine of EU modernization is not strengthening forests as much as other competing sectors like nature conservation which gets reasonable warmth from EU.

6. Conclusion: Toward a wise national use of "modern" forest governance

The integration of Europe has created new cross-border problems for national forest policies, but at the same time the international policy process has introduced governance as a modern concept for forest policy. Based on theory and empirical examples, it is clear that governance is a new approach to policy making within self-organizing networks comprised of participants from policy, economy and society. The challenge in a changing Europe is to implement "modern" governance that also complements the classic instruments of forest government:

1. Forest government only has the ability to solve problems by enforcing solutions backed by the power of the state. Within a forest policy driven by real conflicts, this basic function cannot be replaced by a non-compulsory process like governance. The challenges of forest government are different in young and old democracies in Europe. Whereas the young democracies have to improve implementation to impact forestry in the field, the old democracies need to speed up the formulation of new legal programs to keep up with innovation in the field by private and state forest users.

2. Forest governance processes—as National Forest Programs, certification or MCPFE—offer chances for mutual learning by stakeholders from policy, economy and society in forestry issues. Forest scientists in particular could use these forums to increase the transfer of knowledge about forests between stakeholders.

3. Apart from information exchange, forest governance processes deal with power as they tackle issues of forestry. It will depend on the distribution of information and power if a certain forest participant will be able to organize support for his or her interests and needs. Therefore, it is not recommended to join every forest-related network. The most important strategic decision is to select the most useful networks. Scientific quantitative network-analysis provides relevant information about the power and information processes within networks.

4. The state forest administration—comprised of policy tasks and management of state-owned forest in different organization models—is the key player in forest government. The European trend of downsizing state budgets has caused high pressure on the state forest administrations to focus on profit-oriented market activities. The profit-seeking state forest administration is forced to reduce services of public goods from the forests.

5. Governance offers a new task for a facilitating state forest administration. Governance processes need a neutral mediator to activate the network. Such a role could be fulfilled by the state forest administration if it gives up the narrow focus of being only the speaker for profit-oriented sustainable wood production. If the state forest administration fails, another state administration will do the job and gain a central role in the forest.

6. Governance can gain momentum if it fits well into specific government programs. A recent example is the Forest-Based Sector Technology Platform 2005. The platform promotes the shift toward a market-driven forest sector throughout Europe. This focus on markets fits well into the key agenda of the EU to strengthen free markets.

7. Governance is weak when it tries to change the impacts of government programs. The EU Forest Action Plan is an example for such frustrating efforts. The non-binding forestry strategy cannot protect forestry from the impacts of other forest-related policies of the EU, especially environmental or rural development policy. In these cases, governance means that forest participants accept and adapt to the EU government framework already decided by other policies.

8. EU forest instruments are frequently labelled "modern" and thus superior to national forest policy. To a great degree this label is applied

by the informal interests of EU institutions and specific member states. Therefore EU forest governance is often unjustifiably lauded as modernization. Traditional national instruments might be better and more innovative in many instances.

9. Governance is a challenging and sometimes risky search for new solutions to forestry issues by networking participants from policy, economy and society. A wise use of governance means keeping in mind the strength and reliability of the classic forest government instruments and moving beyond them only after verifying that the effort is worthwhile.

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Chapter 3
New agendas, old habits in Amazonian forest policies

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Abstract

The forest sector has experienced profound changes worldwide since the 1990s. Property rights over forest lands have been devolved to resident populations. Over 60 countries with large extension of tropical forests have decentralized their government processes, including forest decision making. Where decentralization has occurred, local people have gained a voice in local government, which in theory extends to forest decision making. Forests have also gained a new role as a contributor to rural development and community forestry has expanded as a result. This chapter reviews the unfolding of those trends in the Amazon region, in particular in Bolivia, Brazil and Peru. While important progress has been made in devolution of forest property rights, forest decision making is still largely in the hands of specialized agencies. However, often through grass roots organizations and NGOs, local interests are being taken into account. Communal forestry is increasing, but still at a rather slow pace. The old political habits slow down progress in forest governance reform. The timber industry continues to expand, and in the entire region illegal timber extraction exceeds legal extraction. Forest regulation is designed mainly for a timber sector forest exploitation model, and governments impose excessively complicated and expensive administrative requirements on the new forest users. National political struggles in Bolivia and neoliberal economic policies in Peru undermine the progress that Amazon countries have made in their reform of forest policy.

1. Introduction

The last two decades have seen important and encouraging changes in the forest sector worldwide, what Sunderlin et al. (2008) call a forest paradigm shift. Since the late 1970s tropical deforestation has become an issue of worldwide concern. The issue was high on the agenda of the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, and this pivotal meeting has been followed by subsequent intergovernmental forums and plans of actions, currently known as the United Nations Forum on Forests (UNFF 2009). This forum and participating UN member countries are committed to achieving sustainable forest management and enhancing the contributions of forest to development goals. Similar changes have been taking place at the country level. Since the early 1990s many countries have adjusted their legislation to reflect the changing views of forest.

This has included legislation to transfer property rights to local forest users, which has encouraged granting indigenous and small holder private ownership or allocating forest land exclusively for local users (Sunderlin et al. 2008). In addition to these wider forest governance changes, related projects in communal forest management and communal forest enterprise development have emerged (Sabogal et al. 2008). Community forestry has been introduced and promoted throughout Latin America (*Ibid.*) with important successes in Central America and Mexico (Bray et al. 2005).

The forest sectors in countries in the Amazon basin have experienced equally profound changes of the last two decades. Most relevant, perhaps, has been the change in formal property rights over forest lands, which has advanced more in South American countries than anywhere else in the world (Sunderlin et al. 2008). Since the mid-1990s forest policies have been adjusted to refocus the forest sector on rural development and conservation, as

opposed to promoting corporate forestry dedicated to commercial timber extraction. These recent shifts suggest that forest conservation, equitable benefit sharing and national development objectives are better addressed now than they were several decades ago.

In 2008, tropical forestry took a new turn. The contribution of forest conversion or degradation to global carbon emission is generating many so-called REDD initiatives (Reducing Emissions from Deforestation and Degradation). REDD was preceded by payment for environmental services (PES), which includes REDD as well as other services like downstream water regimes and biodiversity conservation. REDD and PES increase the market value of intact natural forests. Holding ownership over those forests should, in theory, create conditions that allow people to benefit from the increased value of standing natural forests.

Other factors, however, are having worrisome effects on forests and their benefits. Biofuel production—carbon dioxide neutral alternatives to fossil fuel—is gearing up in major tropical forest countries like Indonesia and Brazil. While biofuels and REDD initiatives are the most visible and high profile trends in tropical forestry these days, other trends can also be expected to have impacts: high oil prices, as experienced in 2008, and the current international financial crisis will arguably continue to impact tropical forests. Both trends already have seriously impacted rural livelihoods as commodity prices have increased, incomes declined, foreign remittances reduced and a vast number of people returned to the countryside from cities because of lost jobs. The latter trends are likely to continue for some time, and it can be expected that rural people will increasingly turn to forests to make up for the economic downturn.

While the sketch of the forest sector above might suggest that Amazon countries would be well positioned for appropriate policy responses to the trends presented, a closer look at the political landscape invites a more sobering outlook. A deeper examination shows important positive developments but also some persistent obstacles that have prevented the forest sector from achieving rural development and conservation objectives, even though these objectives were actively pursued in policies and legislation. Furthermore, in several of the countries with Amazon territories, the wider political landscape is negatively affecting the forest sector.

This paper aims to provide a brief synopsis of the forest sector and its recent policies in the Amazon basin. The paper also presents some of the extra-sectoral factors that are currently influencing forestry itself. Based on this overview, the paper then speculates on what may lie ahead given the contemporary worldwide trends mentioned. The focus of this discussion is Bolivia, Brazil and Peru,

three countries that hold within their territories 7%, 60% and 13% respectively of the 5.5 million km² total Amazon tropical forest. These countries are growing increasingly connected by an ever-expanding road network, a fact that will greatly influence the future of the Amazon forest landscape and forestry.

Section Two summarizes the positive trends of the last two decades in the forest sector in the three countries. Section Three observes some of the "old habits," that constrain the forest agendas for conservation, poverty alleviation or national economic development. Section Four draws some general points from the evidence presented in the chapter and Section Five concludes.

2. New forest agendas in Latin America

The Amazon region countries have completed important forestry reforms over the last decades, as part of the global trends in forestry mentioned above. There are three main indicators of the changes that have occurred. The clearest indicator is the widespread forest and forestland tenure reform. A second indicator is the change in forest related decision making and the extent to which decision making became more democratic and participative. A last indicator is the progress that has been made in so-called "communal forestry" in various countries in the region.

Tenure reform

Brazil's most recent land and forest tenure reform began with the revised 1988 constitution which recognized rights to land by indigenous people and slave descendents. The same constitution also distinguishes between public and private property, determining that forests held under any other regimes but private property are considered public lands. The total area of 381 indigenous lands and 35 extractive reserves is about 115 million ha, or over 20% of the Brazilian Amazon (Chirif and Garcia-Hierro 2007, Stone 2006). In addition to these two categories, Brazil recognizes land rights held by communities of slaved descendents, and so called sustainable use settlement projects, which are similar to extractive reserves.

An important and widely known example of tenure reform related to forests is that of the extractive reserves of Brazil. Extractive reserves are large areas of mainly forested lands, mostly found in the Eastern Amazon, where the resident population has been granted exclusive use for forest exploitation. Extractive reserves result from claims by local populations that protecting their customary

forest use is a sustainable development and forest conservation strategy. By 2006, extractive reserves totaled of over 8 million ha, with individual sizes varying between 1,181 ha and 1,319,661 ha (Stone 2006, Cronkleton et al. 2008).

The establishment of indigenous territories in Bolivia parallels the extractive reserves in Brazil. Bolivia began to revise its forest governance in the early 1990s. A significant step was signing the ILO Convention 169 in early 1992, which calls for the recognition of indigenous property rights over lands which were historically under customary ownership. Bolivia subsequently enacted legislation to implement the convention and initiated wide ranging land tenure reform. Since the mid 1990s, large stretches of ancestral lands have been granted to indigenous groups as original communal territories (TCO for its acronym in Spanish). Sources provide different figures about the number and extent of TCOs. Chirif and Garcia Hierro (2008) provide a figure of 12.5 million ha of land that has been requested by indigenous groups, of which 7.4 million ha had been titled by 2006.

In addition, other legislation allows formal recognition of erstwhile legally nonexistent rural communities and has allowed farmer communities in the forest rich Bolivian Amazon to be granted communal lands. The size of the grant is equivalent to the number of families in the community times 500 ha. As a result several million ha of forestland in the north are now communally owned, in addition to the TCOS held by indigenous groups.

The picture of tenure reform in Peru is less unequivocal as in Bolivia or Brazil. Taylor (2006b) mentions that state recognition of indigenous land rights already happened in 1916. However, only in 1974 did the country's legislation formally recognize indigenous communities as a legal entity that can solicit property rights over forest territory. A territory titling process for indigenous communities only began in the 1980s, but has meanwhile resulted in over 10 million ha of land being titled for indigenous communities. This is only 62% of about 16 million ha that AIDESEP, the association representing Peru's indigenous federations, proposed as a goal (Chirif and Garcia-Hierro 2007).

The legislation, however, distinguishes between rights to agricultural versus forest land. An indigenous community may hold legal property rights over the former, but only usufruct rights over the latter (Chirif and Garcia-Hierro 2007). Lakes and rivers, common in most parts of the Peruvian Amazon and an integral part of customary territories, are entirely excluded from the indigenous territories legislation. These stipulations seriously weaken the rights held by indigenous communities, and cases have occurred in which government officials chose to ignore even those recognized rights and allow intrusion by other parties, even leading to violent

conflicts (Chirif 2008). Of further concern is the quest for sub-soil natural resources. Almost the entire Peruvian Amazon is carved up for possible exploitation; 36 million ha overlap with indigenous territories. While communities must technically be consulted if mineral exploration is to take place, it does not mean that communities are protected from danger: companies operating inside watersheds have left parts of indigenous territories with high levels of contamination and near toxic levels of contamination of the resident population.

In addition to indigenous communities, a significant number of farming communities occupy territory along rivers and the main roads. While most of them have some degree of formal recognition by the state, there are few who have acquired the legal status of *comunidad campesina*. Those that do not have this status are not able to hold legal title over territory. In practice the communities in the Amazon that are formally recognized also have a communal territory (see http://www.siamazonia. org.pe accessed 2009-2-6). These are usually small areas, and formal property rights can be held only by individuals. In addition, communities have so called communal reserves, protected areas over which communities hold limited rights for natural resource use.

Democratization of forest decision making

The three countries reviewed here have experienced important decentralization processes over the last two decades (Larson et al. 2006). These decentralization reforms have been significant and far reaching. While they have impacted forest decision making in different degrees, without doubt decentralization—as well as other related governance reforms—has had important implications for the democratization of forest decision making.

Brazil has a federal political structure, which means that while national policy and legislation define the general aspects of forestry, state governments have gained important influence over forest matters: control of forest policies falls within state jurisdiction (Larson et al. 2006, Stone 2006). For instance, the state of Acre, the home of the rubber tapper movement, has since 1998 promoted sustainable forest management, including community based initiatives (Stone 2006). Brazil, like many other countries in South America and elsewhere, has also assigned important responsibilities, authority and resources to municipal governments. However, most municipal governments carry out little forest decision making. Specific agencies in charge of forest property categories dominate decision making where diverse property regimes is concerned. The extent to which

these agencies allow for democratic decision making varies per agency.

While formal governance reforms—mostly reflected in the decentralization process—have yet to seriously affect forest decision making, several agencies and state governments have become more susceptible to pressures from forest stakeholders and their support organizations. The latter have formed various more or less formal coalitions, often reaching beyond national borders (Colchester et al. 2003). By using national and international media and political lobbying, forest stakeholders have become effective in influencing agencies and state governments in the definition of forest related policies. The literature also reports that Brazilian state governments have become more forest and forestry development minded on their own initiative, even where civil society organizations remain weak (Stone 2006).

Beginning in the 1990s, Bolivia experienced a municipalization process similar to Brazil's. Decentralization reforms and a new forest law gave municipal governments wide reaching decision making autonomy over municipal forest lands. These reforms meant that forests could be given out as concessions to organized groups other than forest companies. Forest-rich municipal governments were required to set up their own forest unit, and in some municipalities they actually took activities over from the national forest agencies (Taylor 2006a). In addition to making forest decision making more democratic, the changes also made the forest sector more accountable and transparent and eliminated some of the most blatant political patronage that marked the sector before the mid-1990s reform.

The forestry reform fundamentally changed the rules of forest exploitation in Bolivia. Concession holders, including communities, now pay a fee per area and not per volume of product exploited as before. The new fee structure was expected to finance agencies in charge of implementing and monitoring and leave funds to be invested into forest research. Furthermore, the demands on forest management plans and annual operation plans became stricter.

While decentralization in Peru has not progressed at the same pace as in Bolivia and Brazil, the country has experienced other encouraging forest governance reform mechanisms. Peru enacted decentralization legislation to transfer important faculties and resources to departmental governments and municipalities. The actual implementations of these new regulations, however, have been quite slow, largely because of a tenacious resistance from past several central governments in power. Only in the last few years have Amazonian departmental governments actually been taking over control of forest governance.

However, as in Brazil, civil society in Peru has been quite pro-active in pursuing local land rights, sustainable forestry and communal forestry agendas. During the early 2000s shortly after the collapse of the Fujimori regime when the country was in serious political crisis, in several regions in the country including Lima so-called forest *mesas de concertación* (reconciliation tables) emerged. *Mesas de concertación* were regular meetings of actors who had some interest or stake in the forest sector to discuss pressing agendas that had not been agreed upon by the participants. While *mesas de concertación* had no formal authority, they were quite influential and were taken very seriously by the various government agencies. The latter also actively participated in the meetings. The *mesas de concertación forestal* or related groups continue today in Peru and in some cases have become quite influential forums.

Advances in communal forestry

Sabogal et al. (2008) consider communal forestry as all forest management not carried out by corporate or single person enterprises, with the purpose of improving the well being of members of villages or other types of settlements through sustainable forest use. Community forestry operates within the bounds of relevant legislation, makes collective decisions on areas being managed, applies reduced impact management, focuses mainly on forest product commercialization and receives external technical support. While this definition of communal forestry excludes, for instance, forest management carried out by many Amazonian residents that is not market-oriented, it does, however, allow for an assessment of how much progress forestry reform is making in achieving development objectives. Regardless, data on communal forestry is hard to come by, which makes assessing progress difficult even under such a narrow definition.

While communal forestry, often manifested as communal forestry enterprises (Molnar et al. 2007), has made considerable progress in countries like Mexico, Guatemala and Honduras, the progress is more limited in Amazonian countries. In Brazilian state of Acre, where communal forestry has progressed most (*Ibid.*), government support for communal forest initiatives has significantly improved (Cronkleton et al. 2008). The support shifted its focus from rubber, to Brazil nut, and finally to also include timber. Rubber used to be the mainstay of communal forestry in Acre before it was replaced by Brazil nut when state rubber subsidies stopped. Brazil nut production was eventually outstripped by Bolivia, prompting the recent focus on timber that has taken place in Acre. While some communities have been making the transition to

timber, this has not yet been a region-wide trend because of locally limited capacities and persistent constraints from regulatory agencies. Since 2000, the state government has expanded its support to 26 communities that previously largely focused on rubber. In 2005 a cooperative was established to support timber producing communities. Because of the constraints and limited progress, many people are turning to cattle ranching as an alternative to communal timber production (Cronkleton et al. 2008).

One trajectory of communal forestry can be seen from the example of the sustainable development reserve in Mamirauá in the state of Amazonas. Beginning in the late 1970s, communities began to protect fish stocks in lakes located within the forest territory. In the mid-1980s, conservationists started to promote the region as a conservation area. Since then, communities, conservationists and the Amazonas government have negotiated to reach common ground. Existing communal organizations set up since the 1970s played an important role in the progress made. Important advances have also been made in organizing communal logging, building very much on existing communal practices. An important adaptation has been to simplify the regulatory norms for communal logging so that participants do not have to prepare the elaborate and expansive management plans usually required (Cronkleton et al. 2008).

Communal forestry in Bolivia has equally significant experiences to report. Communities have several ways to access the forest for communal forestry. They can organize themselves as a social site group (ASL for its acronym in Spanish) in which case they can access public lands outside communal territory. By 2006 the Forest Service had approved 29 ASL management plans for a total of 600,000 ha, and some 83 ASLs had registered. Not all ASL members, however, are community members, as several cases are known of ASLs composed of members who reside in local towns.

Bolivia's forest law grants indigenous inhabitants exclusive rights to exploit forest products from the lands they own, including TCO lands. Nebel et al. (2003) estimate that indigenous groups hold 8.3 million ha of forest with commercially valuable timber. In 2006, 83 indigenous community forest enterprises had a forest management plan or an annual logging plan and exploited more than 1.3 million ha (Benneker 2008). NGOs finance most of the forest management plans and annual logging plans, and corporate forest enterprises finance an important number of annual logging plans. About 20% of the plans were financed independently.

The influence of private companies in communal forest development in Bolivia is most notable in the increase of farmer communities managing forest areas over 200 ha, an area that needs a formally approved management plan. By 2006, 52 communities held forest management plans and 28 held annual logging plans of a combined area of more than 500 thousand ha. About two thirds of these plans were financed by timber companies and about one third by NGOs. When timber companies finance the management plans, communities sell their timber exclusively to the company, and the company may be fully in charge of the logging. Several mechanisms exist for farmers to log smaller tracks of forest with more simple procedures. However, in many instances, these mechanisms have been used to illegally log timber from wider areas (Cronkleton and Albernoz 2004, Benneker 2008).

The Brazil nut sector in northern Bolivia has experienced important communal forestry progress. Previously most Brazil nut stands were held in private estates by the regional economic elite. As a result of the region-wide devolution of forestlands to communities, community members have increasingly shifted to harvesting Brazil nuts from their own communal lands instead of working as laborers on private estates. In the department of Pando alone, 157 communities had their communal land formally recognized as part of the national land titling process. Approximately 40% of the territory in Pando, a total of 2.4 million ha, is now under indigenous or communal ownership. All of these communities are likely to be harvesting Brazil nuts from their own lands.

Peruvian legislation defines communal forests as located within indigenous lands and small farmer communities; these forests are for exclusive use by the communities, providing they are exploited with approved management plans. Legislation related to protected areas requires consultation with resident communities, and their representatives must join protected area management committees.

Peru's progress in communal forest management was heavily influenced by its turbulent recent history. During much of the 1980s and 1990s, the important forest regions were controlled by insurgent groups or were the theater of battles with armed forces. The actual management of forests by communities, to the extent that community forestry as defined by Sabogal et al. (2008) is taking place, is still limited to some 80 initiatives. Some important experiences do exist related to protected areas and forest with similar status (Alvarez et al. 2007). However, in general protected area management remains top down and does not truly meet participatory standards (Swiderska et al. 2008).

3. Old habits in Latin American forest policies

The persistent timber industry

In Brazil, Bolivia and Peru the timber industry has continued to thrive and remains an important player in the forest policy arena; as such, timber companies often interfere with the forest activities of other actors.

Since signing the new forest law in 2006, Brazil introduced the concept of national forests and expects to designate 50 million ha as national forests by 2010. In 2005, a new concession system was enacted for the exploitation of national forests, and the newly establish Brazilian Forest Service is now in charge of its implementation. This policy, however, still awaits full implementation as only 14 million m³ of timber were authorized to be logged in 2004, while that year saw production 24.5 million m³ (Barreto et al. 2006), about two thirds for domestic consumption. Brazil also has 28% of its Amazon territory designated as conservation area and plans to protect an additional 10% (GFW 2009).

The forest sector in Bolivia has changed dramatically in the past three decades. The country's timber industry expanded significantly in the 1970s when tropical forests became accessible because of oil exploitation. Then nationwide economic decline, particularly the differential exchange rate applied at the time, negatively affected the timber sector. Once Bolivia adopted neoliberal economic policies, the timber sector bounced back. However, the sector became notoriously corrupt and a tool for political patronage. By 1994, timber companies had been granted 20 million ha of forests for logging; production had increased from 320,000 to 448,000 m3. During the late 1990s, production declined drastically because of a regional economic crisis and also because of the new, stricter forest regulations. The 2005 production reached 826,000 m3 and in Bolivia some 2 million ha of forest land were certified, mostly in large concessions (Pacheco et al. forthcoming).

The forest sector in Peru had mostly collapsed by the beginning of the 1990s because of civil war and threats from insurgent groups which controlled access routes to timber-rich forests. When the civil war subsided, the industry rebounded though initially with little effective regulation or control. Timber came mostly from annual harvesting rights over 1000 ha areas, but companies were exploiting much larger areas in reality. The new timber legislation assigns exploitation rights based on public bidding with an area-based fee and under strict management and administrative rules. However, the implementation of forest regulation is minimal, and almost all of Peru's timber is from illegal sources.

The fact remains that, despite efforts to control the timber industry, illegal logging is rampant in Peru, Brazil and Bolivia. Barreto et al. (2006) suggest that 40% of Brazil's production is illegal, and most experts estimate that 90% of the timber from the Peruvian tropical lowlands is logged illegally. Furthermore, given the administrative and technical requirements required to run logging operations (see the next section), new forest actors often have no other choice than to turn to companies to assist them when trying to get access to timber on land that is now theirs (Benneker 2009), mostly on very unfavorable terms for communities.

Regulatory obstacles to democratic forestry

One of the consequences of the forestry reforms described above is that stricter rules on forest exploitation apply to all users. Corporate actors, small entrepreneurs, and community actors are required to follow often unreasonable regulations that do not adequately consider the potential impact of certain forest uses or users or the capacities of the users to comply with the regulations.

In Bolivia and Peru, there is no distinction between who engages in forest exploitation and the technical requirements of the exploitation. In Bolivia, a distinction is made for timber exploitation of areas larger and smaller than 200 ha. Areas under 200 ha do not require a detailed management plan. However, for areas over 200 ha, forest companies, ASLs and communities all need to prepare technically complicated management plans that are costly to prepare and require expensive expertise, yet which are often ignored once approved.

Brazil nut collection is another forest activity for which the Bolivian Ministry of Sustainable Development has elaborated a set of norms (MDS 2009). However, the norms are shaped largely on a timber extraction model. In most cases, only people with professional training, certified as forest technicians, are allowed to prepare the necessary inventories and management plans in order to get official permission to extract Brazil nuts. This implies that, according to the rules, potential Brazil nut collectors, even those who collect from communal forest land, would need to engage university-trained specialists to undertake the necessary data collection and prepare a management plan that conforms to the technical guidelines. However, the costs required for such management plans far surpass the income from Brazil nut collection. As a result, Brazil nut collection in Bolivia remains largely outside of any regulatory mechanism.

As mentioned above, Brazil has actually adopted regulations that simplify the procedures

for communities engaging in timber extraction. However, Brazil is still the exception rather than the rule. In addition to the complex regulations and administrative procedures required to gain legal access to forests in Amazonian countries, institutional weakness, lack of administrative capacity and rampant corruption among agencies in charge of natural resource administration are common. One example from Peru that demonstrates these constraints involves an indigenous group, the Yacutaita. The group began an initiative in the late 1990s to manage fish reserves—especially the highly priced and much sought after *Arapaima gigas*—in the Dorado Lake, located within the tropical lowland National Reserve Pacaya Samiria. With assistance from a Peruvian NGO, the Yacutaita prepared an *A. gigas* management plan, which focused mainly on monitoring the lake to keep out all illegal fishing. However, the plan took nine years to be approved, even though monitoring the species and establishing a corresponding fish quota is a fairly straightforward process. During these years, the community achieved an *A. gigas* population increase from a handful to 600 mature individuals. Only 10 percent of the mature population was to be harvested and sold annually, with which the community could finance the monitoring costs and still obtain a handsome profit. However, in 2008, even though the community had an approved management plan, the annual harvesting permit was rejected because of technical observations. This will likely undermine the monitoring activities, which are financed by the annual harvest. As a result, the Dorado Lake fish population will once again be subject to rampant illegal fishing (Chirif 2009).

Political battlefields and forest policies

Bolivia, like many Latin American countries, has seen significant upheaval throughout most of its history. A new chapter began when Evo Morales and the MAS social movement were voted into power three years ago. MAS and Morales represent mostly Andean indigenous people and traditional coca growers, people who until recently had largely remained at the margins of the political theater, which, until recently, had been dominated by parties representing the economic elite and the more traditional labor organizations.

The political victories of MAS and Morales caused alienation with the elites in four of Bolivia's nine departments in the eastern area of the country. Three of these departments, Santa Cruz, Beni and Pando also hold most of the country's tropical lowland forest.

While the forest sector in Bolivia has experienced important and positive changes, as explained above, the sector also has serious structural weaknesses that require a sustained political and institutional support and possibly future adjustments (Ruiz 2005). The new forest regime relies on a national agency to administer and monitor, and municipalities and departmental governments are largely in charge of forest development of forests that are held as private property by indigenous groups and small farmer communities or as concessions by timber companies and ASLs. The system was working poorly, even before the MAS government took control of Bolivia. The national forest agency relied on fees and taxes from the sector for its daily operation, but forest users, especially timber companies, were unwilling or unable to pay the per area fees established under the new regulation. The forest sector was of little interest to departmental governments, and municipal governments often had insufficient capacity and resources to establish effective forest units. As a result, the new forest regime has almost collapsed. While it promoted forest devolution, allowed multiple actors to enter the sector and promoted democratic decision making, the new forest regime was largely a neoliberal endeavor, since it promoted profits and relied on market mechanisms.

The MAS government intended to pursue a more socialist agenda, making community forestry a top priority (Pacheco et al. in preparation). This new focus, however, has hardly been pursued yet, in part because most of Bolivia forest activities are located within three departments that oppose the government. The departmental governments view the heads of the departmental offices of the national forest agencies as representatives of the MAS government. Furthermore, the same political battles are being played out at higher levels: USAID and various other international development agencies that supported forestry joined the trend of antagonizing the MAS government, even before the United States' ambassador to Bolivia was expelled from the country in 2008. As a result of these recent developments, the Bolivian forest sector is in virtual stalemate. The successfully passed recent referendum, in which a new Constitution was adopted that promotes distribution and equity, including access to forest lands, is likely not to change the conflicting positions between the national government and forest-rich departments and municipalities.

Similar conflicting national and regional tensions can be reported from Peru. In October 2007, Peru's president, Alan Garcia Perez, wrote in *El Comercio*, the country's most respected newspaper, an article with the title: *El syndrome del perro del hortelano*, which loosely translates as "the dog in the manger." It is a metaphor that symbolizes Garcia's disagreement with forest policies which emphasize forest conservation, which recognize

ancestral rights, and which promote locally driven economic and social development.

The Garcia government's views on the forest sector are driven by two main forces. One is its faith in neo-liberal economics as the way to solidify or expand the macro-economic growth that Peru has experienced since the end of 1990s economic crisis and political turmoil. When in power from 1985 until 1990, Garcia and his APRA party pursued a progressive economic policy, which included a moratorium on national debt payments and the nationalization of major banks. Since returning to power in 2006, Garcia has pursued a neoliberal economic policy, continuing the trajectory of his predecessor, Alejandro Toledo. The second driving force is the recent free trade agreement with the United States. While that agreement was approved under the Bush administration, the majority Democratic Congress required that Peru address illegally logged timber entering in the United States. The Garcia Government has used the Peru-US FTA to pursue forest policies that are ultimately driven by a neoliberal economic agenda, favoring privatization and capital investment, with the expectation that this will benefit all forest stakeholders. The Garcia government proposed legislation—Decree 1015 and 1073— which would allow a simple majority of votes, as opposed to requiring a 66% majority as was established by previous legislation, to decide on the assignment of communal lands, including sales to outsiders. This was seen by many people as a measure to permit private companies to buy communal lands and use them as private investments. After widespread national and international protests, the proposal was voted down in August 2008.

A similar example is the proposition of Decree 1090, essentially a revision of the forest law demanded by the United States for the free trade agreement to be signed. The revision ironically identified as "the law of the jungle" created the opportunity to obtain private ownership over so-called "vacant lands" (*tierras eriazas*). The lands described under this legislation can only be used for reforestation purposes. Supposedly, some 8 million ha of the 63 million ha of forest lands, are apt for such reforestation on privately held forestlands. Already some cases have been reported in which fully-grown forest was given as a reforestation concession, effectively giving a carte blanche for indiscriminate logging of the forests, something that is widely expected to occur under the proposed new legislation. Many also foresee legal opportunities for economically powerful actors to obtain legal ownership rights over land held under usufruct property rights by others.

4. Amazonian forest policy: A Sisyphus syndrome or a tripudium step?

On reviewing the evidence presented in sections two and three, there seems to be reason to be optimistic about Amazonian forestry and related forest policies; but at the same time there is reason for concern. Probably the biggest advance in the last two decades is that forestry is now generally viewed as a sector that can address some social goals by providing various services and addressing certain needs, including development and conservation, in addition to national economic growth. Not least of all, it is now widely recognized and even enacted as law that development objectives are primarily a matter to be determined by those who are to be affected.

The tenure reforms summarized above and described in more detail elsewhere (Larson et al. 2008) are certainly important and relevant advances, because they provide the very foundation necessary to realize the multiple goals that forests are now expected to fulfill. However, gaining property rights without any significant opportunities to improve additional outcomes make these changes meaningless. So far, the evidence suggests that property rights reforms have not yet generated major additional positive outcomes. While communal forestry is being promoted and is having some success, the commercial timber sector has continued to expand, in many cases competing with communal forestry (Sabogal et al. 2008). Sunderlin et al. (2008) had to search extensively in the material that they have gathered on forest property changes between 2002 and 2008 to come up with a short list of examples where changes in property rights resulted in benefits to communities, lower levels of illegal logging or more sustainable use of forests. As Benneker (2008), de Jong et al. (2006) and Cronkleton et al. (2008) have shown, the private sector has adjusted to the property rights changes, but is in many cases coercing the new forest owners into agreements and collaborations in which the terms are largely dictated by the powerful and political well-connected private sector.

The governments and government agencies responsible for regulating and administering natural resources of Peru, Bolivia and Brazil are to be commended for advances, but at the same time they can be blamed for lack of progress. While at times enlightened government personnel might go to great efforts to adjust forest agendas to better comply with the multiple goals of the forest sector, it is this same sector that imposes obstacles to progress. For example, even though

there were serious weaknesses, there was much potential in the forest sector reforms in Bolivia in the 1990s; nonetheless, political infighting has seriously curtailed the positive trends. This has come on top of disingenuous attitudes among lower tiers of governments where often political success and survival had priority over implementing forest policies that would assure more equitable, democratic and sustainable outcomes.

The forest sector worldwide has been plagued in recent years by rampant illegality. This illegality is of great concern. It reflects on the one hand that societies are more concerned about their natural resources, that the value of tropical forest has increased, and that the sector is now better incorporated in national administration and regulation processes. As a result illegality has become more visible. On the other hand, the illegality shows that the possibilities to impose the rule of law on the forest sector have yet been quite limited. International Forest Law Enforcement, Governance and Trade initiatives have arisen in response (e.g. Van Bodegom et al. 2008).

A major question remains on how these processes will influence the outcomes of future trends in forestry, now that the value of forest is being upgraded because of recognition of its importance in mitigating climate change. Many have suggested that REDD processes create important opportunities to generate incomes and that a great part of these incomes can be captured by the people who most need them and who traditionally have been excluded from capturing forest benefits by other players in the sector (Angelsen 2008). However, the Amazon has a history of economic booms and busts, when certain forest products from the region—quinine, rubber, barbasco, oil and timber—experienced increased international demand followed by sudden drops in prices. Compliance with rules and regulations and fair play has never been a common feature of the Amazon forest sector, and such compliance was certainly not a characteristic of the boom periods. While this is no ground to be pessimistic, it should pose a warning of the challenges ahead, if compensation for reduced deforestation or degradation will be widely implemented in Amazonia. Fortunately, since the issue at stake—global warming and its expected negative climatic consequences—is of international concern, there is likely to be serious international monitoring and pressure to ensure compliance with globally accepted standards of good governance. For instance, international pressure can in part be credited for the changes in property rights mentioned above.

The possible impact of the current financial crisis and future economic instability for groups that are at the edge of poverty, and what this means for the forest sector, should be of concern. In a future scenario of possible destitution caused by international economic instability, cases where people turn to forest and forest lands for solutions is not merely imaginary. Neither are possible related conflicts with the new forest owners, companies, or conservationists. The Peruvian case of *Flor de la Frontera*, where an indigenous group violently evicted illegal settlers within their territory in 2002 and caused the death of 16 people, should be viewed as a warning of things to come. The administrative apparatus was inadequately prepared to deal with such problems; this is even more reason for concern.

5. Conclusions

Forest policy in countries of the Amazon basin has experienced many changes in the last two decades. Property rights reforms, improved democratic decision making and progress in communal forestry are all positive developments. On the other hand, national governments are reluctant to give up old ways because they want to maintain a viable timber sector for its contribution to the national economy and the need to satisfy national demand for timber. The tropical forest sector suffers from poor governance more than other sectors because of its recent history as a sector dominated by a small group of wealthy entrepreneurs and political cronies and because of the practical difficulties of monitoring the forest for compliance with the law. The unfamiliarity of many of the new actors, including remote local communities, with administrative procedures and/or their lack of political clout has limited their potential to seriously influence forest policy formulation and implementation. Furthermore, if economic instability affects large populations in Amazonian countries, people may increasingly turn to forests to make up for losses suffered elsewhere. Some recent cases suggest that this could increase conflicts between the new owners of tropical forests and people who are affected by economic decline. This is the landscape within which REDD mechanisms will be implemented, and these conditions need to be considered seriously if REDD mechanisms are to contribute to furthering the goals of equitable development and democratization.

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Chapter Four
Theories for forest policy: An overview

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Abstract

This paper is an overview of political and policy theories which are used in the sub-discipline of forest policy analysis. Also, trends over time in theory use are followed. The aim is to consider whether the sub-discipline of forest policy analysis deviates from the "mother discipline" of policy science in general, and if so, how and to what extent. While doing so, the paper also offers an overview of current theories in forest policy analysis. Such an overview might be helpful for MSc and PhD students as well as for other researchers who are searching for a relevant theory to structure their data collection and analysis on forest policy. Finally, the overview offers a guide to the theories provided by the various papers in this publication.

1. Introduction

Forest policy analysis originally developed as a sub-discipline from the forest sciences. This meant that it was foresters, rather than political scientists, who primarily became involved in policy analysis. As a consequence, the role of political theory in such analyses remained limited. Also, the analyses tended to be normative and oriented towards policy advice (Glück 1992). Two decades ago, this situation gradually but fundamentally changed. Foresters became more knowledgeable about political and policy theories when forestry curricula at several universities started to introduce policy courses, both at the BSc and MSc levels. In addition, political and policy scientists got more involved in forest issues, probably because "green politics" had become a serious topic within their disciplines. Today, when reading forest journals that include policy analyses, many political and policy theories that are fashionable in the "mother discipline" can be encountered. This article gives an overview of the use and trends in such theories in the forest sciences, both from a contemporary and a historical perspective. It does so by (1) presenting an overview of relevant political and policy theories, based on two handbooks; (2) producing an overview of the use of such theories in forest policy papers as can be deduced from the database *Scopus*; and (3) distinguishing trends in theory use in the forest policy sciences.

2. An overview of theories

There are naturally many handbooks from which one can construct an overview of political and policy theories. As an illustration, we select two—one from the political sciences in general and one from the policy sciences in particular—which are frequently used in university curricula, often cited in the literature and of which the authors are widely recognized as being authorities within their disciplines. The first one is *Theory and Methods in Political Science* of Marsh and Stoker (2002). They distinguish the following political theories relevant for current political analysis:

1. Behavioralism
2. Rational choice
3. Institutionalism
4. Feminism
5. Interpretative theory
6. Marxism
7. Normative theory

We briefly introduce these theories here. *Behavioralism* focuses on observable conduct in politics and on empirical testing of theoretical claims to explain such political behavior, for example political activism; so observing, testing and explaining are the three key words. To generalize findings, large-N datasets are preferred. With that, behavioralism stands in the positivist tradition, which claims that: (1) reality exists independently of our knowledge (this is the so-called *realist* position), (2) natural and social sciences are analogous, (this is the so-called *naturalist* position), and (3) science should explain phenomenon, generalize findings and separate facts from norms and values (this is the so-called *objectivist* position (Crotty 1998). This mainstream philosophy of science is contested, for example by *interpretative theory*, the counterpoint of behavioralism. This position rejects the notion that the world exists independently of our knowledge. On the contrary, it is claimed that, through scientific inquiry, scientists construct specific "facts" about the world (the so-called *constructivist* position). Hence, there is no objective, real and independent world "out there," since our scientific assumptions and theories create its image and characteristics in the first place. Moreover, scientists—being people after all—are influenced by their normative environments (*anti-objectivist* position). As a consequence, facts, values, norms and meanings are strongly intermingled. Also, a distinction is made between the natural and social sciences, because the objects—either nature or society—are so different (*anti-naturalist* position). Since political scientists have to understand a socially constructed and mutually interpreted world a double hermeneutics characterizes the social sciences. In contrast, the natural sciences are based on a single hermeneutics, because nature does neither "interpret itself" nor "speak back" to the researcher. Just like behavioralists, interpretative theorists can study political activism, but their approach would be very different. Instead of sending a questionnaire to many political activists, statistically processing their answers and providing general explanations, they would visit some of them personally and interview them openly and in-depth to reconstruct the meanings that activists attach to their own political activism.

The other theories, dealt with in Marsh and Stoker (2002), stand somewhere on the continuum between these two extremes. *Rational choice* is a specific elaboration of behavioralism which does not build on sociology or psychology but on economics. The central idea is that individuals make political choices on the basis of the highest expected utility, this is to say, they choose that option that probably yields the highest benefits and lowest costs in the near future. *Institutionalism*, next, can be considered a critique of rationalism. It claims that rational choice is mediated by rules,

conventions and traditions, to be defined as "institutions." People do not behave on the basis of the highest expected utility alone, but on the basis of what is appropriate in a certain institutional setting. For example, corruption in politics may produce the best financial outcomes, but in certain political cultures this is not an option at all. Whereas most institutional approaches still stand in the positivist tradition, *normative theory* departs from this. Instead of trying to objectively analyze and explain political behavior by scientific inquiry, either through rational choice or institutional constraints and opportunities, normative theorists try to judge current political practices against some moral reference points, through applying political philosophy or ethics. The central question is: What is a just, democratic and fair political order? Critical theories like Marxism and feminism also stand in this tradition; however they add a radical social change program to their scientific work. *Feminist* scientists often analyze the power structure of current politics and conclude that it is gender-biased. Politics are male-dominated and male virtues are overvalued. On the basis of such characteristics, a just political system cannot be built. It should therefore be "re-gendered," e.g. through positive discrimination of women for vacant power positions. Finally, *Marxism* takes the unjust, capitalist world economies and the unfair superstructures built on them—like the national state or the World Bank—as their points of departure for critical analyses. However, as Marx already wrote, philosophy and science should not aim at interpreting the world, but at changing it. Therefore a lot of intellectual attention is paid to new social movements and their potential for radical social and political change.

The second book is *Theories of the Policy Process* by Paul Sabatier, which has been published in two editions (Sabatier 1999, 2007). Together, these volumes describe the following policy frameworks:

1. Stages approach
2. Institutional rational choice
3. Multiple streams framework
4. Social constructivism
5. Policy networks
6. Punctuated-equilibrium theory
7. Advocacy coalition framework

(Note: In his volumes, Sabatier adds a "comparative policy analysis framework" to his overview. However, this is not a theory in its own right, but a certain methodological approach. For that reason, it is not integrated in the overview of this paper.)

Until recently, the *stages approach*—often referred to as the *policy cycle model* too—was the most dominant framework for understanding policy making in the political sciences. It divides the policy process into a number of stages or phases—

for example, agenda setting, policy design, decision making, policy implementation and evaluation—in order to simplify the complexity of current policy processes and enable meaningful analysis. However, this model has been severely criticized. According to the critics, it is not accurate and too simple in a descriptive sense, not a "real" theory in an explanatory sense and it is too top-down, legalistic and rationalistic in its approach. However, there are a number of other approaches within the policy sciences that serve as alternatives. *Institutional rational choice* is a "thin" institutional approach, as briefly discussed above, which stays close to rational choice. The premise of self-interested and utility-maximizing individuals is maintained, however the fact that rules in politics or cultural settings may alter preferences, cost-benefit analyses, option rankings and—consequently—behavior is taken on board. This model, with its clear action-theoretical premises, is much more analytical and explanatory in nature than the policy cycle model. Next, the *multiple stream framework* (MSF) is a response to the simplicity of the stages approach. Policy making is considered to be much more complex. The key assumption is that policy making can only take off when the three so-called "independent streams" of problems, policies and politics are brought together by entrepreneurs on the one hand and windows of opportunity on the other. In other words, if the streams are not well managed by agencies and/or the political situation is not ripe, no meaningful policy making will happen. Again, MSF is a much more explanatory model than the stages approach.

A third alternative is the *punctuated equilibrium framework* (PEF). The starting point for PEF was the observation from American politics that long periods of continuity have been punctuated by brief periods of major policy change. A Dutch example is the change in water management policy in the late 1990s, where a "water run off" paradigm has been replaced by a "room for the river" paradigm (Wiering & Arts, 2006). The founding fathers of PEF asked themselves where such sudden policy changes may have originated, and their assumption was that it was a result of countervailing coalitions that challenge dominant policies and that gain ever more ground by fashioning new "policy images" through "venue shopping", that is, by advocating their views in as many political venues as possible. This was indeed the case in Dutch water management, where a movement for a more ecologically sound type of water management got ever more response, although external shock events—for example the near-flooding of the River Rhine and the precautionary evacuation of more than 200,000 people in 1995—played crucial roles too.

Another approach that focuses on policy change and policy coalitions is the *advocacy coalition framework* (ACF) of Sabatier himself. Contrary to rational choice theory, the driving forces for political action are assumed to be "shared belief systems" and not rational calculations. Actors from different backgrounds who share certain deep policy and technical beliefs regarding a certain issue may form coalitions, which generally compete with opposing beliefs and coalitions in a plural political system. From this competition and through interaction with policy brokers and outside events, policy learning and change may eventually occur. *Social constructivism*, next, refers to another philosophy of science that Sabatier himself adheres to, namely post-positivism, and has been briefly explained above. In terms of specific policy models, one might for example think of policy discourse analysis or frame analysis. Policy dynamics are explained by how the policy issue and process are named and framed by powerful individuals or hegemonic coalitions in terms of narratives and concepts. The *policy network approach*, finally, does not take the rational, individual actor as the starting point, but as the social agent in policy networks, interacting with and being dependent on others. This leads to patterns of resource exchange, communication, issue framing, social learning and joint policy making in networks.

3. Methodology

The list of theories deduced from the book of March and Stoker as well as from the two editions of Sabatier's volume—in total 11 theories, when overlapping ones from the books are taken together—was used as an input for an analysis of theory use in the forest policy sciences, to be compared with the policy sciences in general. Also, a trend analysis over time was made. For the analysis, the database *Scopus*, in which a vast number of scientific papers is stored, was used to search the main international peer reviewed journals of various disciplines. The program also includes an extensive search machine through which samples of literature can be constructed. For this paper, two searches were performed, one on the forest policy sciences particularly and one on the policy sciences in general. The keywords used were "forest policy," "forest governance" and "forest politics" for the former and "policy," "governance" and "politics" for the latter. These keywords were searched in the titles, keywords and abstracts of all papers. For the policy sciences in general, the search was limited to the social and environmental sciences, the "mother disciplines" of the forest policy sciences. These searches were constructed as such: (1) TITLE-ABS-KEY ["forest policy" OR ("forest governance" OR "forest politics")] and (2) TITLE-ABS-KEY ["policy" OR ("governance" OR "politics")] LIM ("social sciences" AND "environmental sciences"). These searches resulted in two samples of about 12,000 papers on the one hand (forest policy

sciences) and about 220,000 papers on the other (policy sciences). In a next step, the theories from the list and their various synonyms were used as key words to further delineate sub-samples of individual theories. Finally, a top 5 of mostly used theories in the forest policy sciences was constructed.

This method has some drawbacks. If the abstracts of papers are taken into account in the search for keywords, the reference list is automatically included in the search too. This cannot be separated in *Scopus*. For example, a rational choice paper that cites a Marxist book in the reference list with the term "Marxism" in the title will also be marked, not only as a rational choice paper, but as a Marxist paper as well. However, deleting the abstract is not an option, since the first mention of the application of a certain theoretical approach is normally in the abstract. Therefore we should extend the notion of "theory used" to "theory used or referred to." Moreover, the example of rational choice and Marxism shows that there might be overlap and double counting of papers. Therefore the figures below only give a rough indication of theory use and reference in the forest policy sciences. But since we do not use these figures in an absolute sense, but only rank the various theories, the tables below remain modest in their quantitative ambitions. Finally, it should be noticed that both the handbooks and *Scopus* have their own Anglo-American biases. The handbooks

show the theories which are most popular in the Western world—for example excluding post-colonial theories developed in Latin-America—and scientific papers in languages other than English are hardly represented in *Scopus*.

4. Use and trends

The results are shown in Tables 1 and 2. The first table shows the top five theories used or referred to in the policy sciences literature in general as well as in the forest policy sciences in particular. It shows that the classical political theories—rational choice, institutionalism, Marxism—are still quite strong in the general literature, but that the newer ones—policy networks, social-constructivism—are present in the top five as well. This mirrors what some have called the "argumentative turn" in the social sciences (Fischer 2003). Clearly this turn has been more prominent in the forest policy literature. Here policy networks and social-constructivism are higher in the hierarchy, while institutionalism and rational choice are positioned lower. Moreover, Marxism is absent in the top five in the forest policy sciences, although its ranking is still six. Another striking difference is the prominent presence of the advocacy coalition framework (ACF). ACF is clearly particularly popular among forest policy analysts; it

Table 1: Top five theories used or referred to in forest policy literature

Top five theories in policy literature	Top five theories in forest policy literature
Rational choice	Policy networks
Institutionalism	Advocacy coalition framework
Policy networks	Institutionalism
Marxism	Social constructivism
Social-constructivism	Rational choice
6% coverage	*9% coverage*

Table 2: Rankings of the five core theories in forest policy literature by five year period

	< 1995	1995-2000	2000-2005	2005-2010
Policy networks	-	4	2	1
Advocacy coalition framework	-	1	1	5
Institutionalism	-	2	4	2
Social-constructivism	-	-	3	3
Rational choice	-	3	5	4

ranked second in the forest policy literature, but only eighth in the policy sciences in general. This may be explained by its origin, the environmental policy sciences, of which forest policy analysis is part. A final observation regarding Table 1 is the extent to which the top five theories cover part of the samples: the top five theories cover 6% of the sample of policy sciences papers as a whole. This figure is lower than expected. It might imply that more than 90% of those papers are just descriptive or use theories other than those in our list, but this is highly unlikely, because it is based on the core handbooks of the disciplines. Again unexpectedly, this score is higher for the forest policy sciences at 9%. Implicitly, it was expected that this literature would be more descriptive than the policy sciences in general, because forest policy is limited to a specific empirical field; however, this expectation is false. Obviously, the forest policy sciences are as current, in terms of theory use and reference, when compared to the mother discipline.

Table 2 shows the trend in theory rankings in the forest policy sciences in timeframes of five years. Here it is clear that: (1) the policy network approach and social-constructivism have become more popular over time; (2) the opposite is true for the ACF; and (3) institutionalism and rational choice have more or less maintained their positions. These observations further support the thesis of the argumentative turn, although this conclusion should not be overemphasized, since the classical theories remain present. Striking is the recent decrease in the rating of the ACF. Obviously, ACF has lost attractiveness, as it appears to have been a fashionable instrument for some time. A final striking observation in Table 2 is the fact that all theories are absent in forest policy sciences literature published before 1995. Certainly these sciences are a young sub-discipline, but they definitely existed before 1995 (Glück 1992). Therefore one can conclude that this literature has become less descriptive over time. Hence, it is not only current, in terms of theory use and reference, but it has been scientifically professionalized over time as well.

This publication also contains a number of related theoretical perspectives that were presented at the CIAS Conference *Forest Policy for a Sustainable Humanosphere*, held at Kyoto University, Japan, February 17-18, 2009. Besides regional accounts of the latest empirical developments in forest policy in Africa, Asia, Latin America and Europe, this discussion paper also presents several case studies in which theory has a prominent status. Buizer, in her study of local initiatives by Dutch farmers to manage nature, applies the policy arrangement approach that builds on network theory, institutionalism and discourse theory. This approach helps her to analyze the different nature discourses of farmers on the one hand and official policy makers on the other. The discourses are played out in power games

and formal rule settings, leaving the local initiatives with little room to maneuver and scale up. Van Gossum uses the same approach but applies it quite differently. He evaluates the governance capacity of institutional arrangements on sustainable forest management (SFM) in a Dutch province. He concludes that all stakeholders more or less share the same SFM discourse. Moreover, the institutional arrangement fits the shared discourse quite well. Due to this congruence, Van Gossum believes that the chance that SFM will be realized in this region in the near future is quite high. A social-constructivist account is to be found in the paper of Ubukata. He shows how agricultural science is easily re-interpreted—and misused—to legitimize certain forest policies. To illustrate this, he goes into the Thai Eucalyptus debate. Although local communities and NGOs criticized the use of this species, due to assumed adverse ecological effects, forest departments selectively mobilized FAO knowledge to move their own policy forward.

5. Conclusion

The five most popular theories used or referred to in the forest policy sciences are the policy network approach, advocacy coalition framework (ACF), institutionalism, social-constructivism and rational choice. The papers applying or mentioning these theories cover about 9% of the forest policy sciences sample from *Scopus*. This implies that about 90% of the papers apply other theories or remain rather descriptive. However, forest policy science scarcely deviates from its mother discipline. The list of theories as well as the coverage percentage come very close to the observed rankings and figures in the policy sciences literature in general. This implies that the forest policy sub-discipline is current. This conclusion also goes for this publication, in which a variety of theories are applied to forest policy cases. Over time, the policy network approach and social-constructivism have become more popular, suggesting that the so-called argumentative turn has also taken place in forest policy analysis. At the same time, the more classical theories of institutionalism and rational choice have remained with the same rankings. Only the ACF has become less popular. Overall, the use and reference to theories has increased compared to 20 years ago. Hence, the forest policy literature is not only current, in terms of theory use and reference, but it has scientifically been professionalized at the same time.

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Chapter Five
Bridging a divide?
Local initiatives in a multi-level policy context

by I.M. (Marleen) Buizer

This paper is based on a PhD research "Worlds Apart; The Interactions of Local Initiatives and Established Policies" (Buizer 2008). The PhD research contained three cases. This paper focuses on the two of these which involved forest policies.

Abstract

This paper presents two case studies about private actors aspiring to realize their innovative ideas on land management and design in two small areas in the Netherlands. One case involves an area that is to be partly forested in line with operative policies to establish a large urban green structure; the second case is an area that is part of a national ecological structure and already primarily consists of forest. However, in both areas various groups and organizations were seeking to implement alternative land uses and taking action to promote their ideas. It was clear from the start that the ways in which the initiators of these ideas gave meaning to the areas differed from the ideas enshrined in existing policies. The case studies show that there was ample innovative potential at the local level and that ideas do get implemented with considerable effort, due to factors such as personal zeal, perseverance, trust and empathy that developed in people "in the field." However, an analysis of the cases also shows that there has been only limited discussion about the possible wider policy implications of these local innovations. Thus, the study revealed an asymmetry between local innovative potential and an apparent lack of responsiveness on the part of established policy. The study used the policy arrangements approach, consisting of 1) an analysis of the relationships between discourses, actor coalitions, rules and resources at the level of day-to-day interactions between the initiatives and established policy, and 2) an analysis of the relationship between these day-to-day interactions and an assumed more general, structural process of sub-politicization. The study concludes that there was a simultaneous occurrence of sub-politicization and depoliticization which both have significant impacts on the direction of green space policies and determining who can participate in them.

1. Introduction

Governments often express the wish to involve citizens and civil society organizations more closely in policy development. This applies to issues at the neighborhood level, such as how a street, a square or a park should be designed, and it also involves issues at a larger scale, such as who will manage green space in the future and how. Governments attach various labels to these ambitions, such as: "interactive policy development," "co-responsibility" and "new division of roles between governments and society." But what are their full implications? Various authors agree that the state of the art in interactive policy

making is still generally poor in terms of concrete influence on outcomes (Duyvendak and Krouwel 2001, Goverde and Lako 2005, Edelenbos and Klijn 2005, Cornips 2006a, 2006b). Others have emphasized that, rather than questioning the effects of interactive policy making, it is more important to question how all participants in interactive policy making processes—including politicians or officials—use it as a power instrument to further what they want. With good reason these authors emphasize that the question has an empirical nature and therefore there are a great many answers (Van den Arend 2007). This paper, although based on

empirical data and touching on aspects of power, approaches the issue from a different angle.

Rather than taking "interactive policy making" as a point of departure, this paper approaches the issue from the opposite direction, focusing on substantive innovative initiatives by private actors that target alternative management of green space. The first case, Biesland, concerns an agricultural enclave situated in the midst of towns and recreation areas in the Randstad, in the western region of the Netherlands. Part of the enclave is projected to become part of the Balij Bieslandse Forest. There is only one active farmer left in the area, and—together with researchers, civil servants and a few local residents—he worked out a concept of "nature-oriented" farming, expecting that this would convince policy makers to consider it as a viable alternative to expropriation of some of his farmland for afforestation. The Minister of Agriculture, Nature and Food Quality (ANF) promised early in the process to finance half of the plans, provided that the other half would be financed by regional parties. The Minister also stated that the European Commission should approve payments to the farmer before further steps could be taken. Indeed, the initiative was supported financially by regional administrators and politicians. However, the process got stuck in Brussels and there was a danger of its progress being blocked in the region as well. In the second case— Loonsche Land—a theme park, the Efteling, and two nature conservation organizations reached an agreement about the development of a joint land use management plan. The initiative came about after years of conflict between these parties over the building of lodging and accommodations in an area of woods and fields bordering the Efteling theme park; this conflict led to legal cases that went right up to the Council of State. The new plan included the possibility of development in some parts of the area, as well as measures to enhance the nature value of the area as a whole. According to the local initiators, this would be achieved by cutting down forest and improving the conditions for the growth of heather, which is a threatened ecosystem in the Netherlands.

Both initiatives came primarily from private actors, although the government and a complex network of communication channels between citizens and/or civil society organizations, businesses, politicians, managers, researchers and civil servants also played a role in the ensuing processes. In the Biesland case, collaboration grew up via a chance encounter between a farmer, a volunteer and some researchers. In the Loonsche Land case, a private party and civil society organizations wanted to break an impasse when facing the prospect of yet another long-running legal battle. Both initiatives were subject to decision-making processes at different levels of government.

The paper addresses the confrontation between these initiatives and established policy. It pays specific attention to the circumstance that the initiators had to challenge established forest policies at some point in time. This study asks what factors influenced the development of both the policies and the initiatives and also looks at possible broader impacts of the local processes in a multi-level policy context.

The author's own experiences in various contract-research projects laid the foundation for the PhD research which forms the basis of this paper. These projects were commissioned by government institutions (national government, province and municipality) and by a private company. In terms of methodology, the study consisted of various activities: participating in meetings, following the exchange of e-mails, frequenting kitchen table discussions, talking during occasional car rides and constantly communicating through phone calls. These elements all gave insights that allowed detailed descriptions of what had happened, of emotions accompanying key events in the process and of strategic thinking of actors involved. In one case in-depth interviews were included to complement field experiences.

In the following sections, section two explains the theoretical framework that was used. Section three sums up the results of the study. Conclusions in section four focus on the more general question of "what's next."

2. Policy arrangements approach

Introduction

The research used the policy arrangements approach developed by Arts, Van Tatenhove and Leroy (Arts and Leroy 2006, Van Tatenhove et al. 2000, Arts and van Tatenhove 2004, Arts and van Tatenhove 2006). A policy arrangement is defined as a temporary stabilization of the substance and organization of a policy domain (Arts et al. 2000). The policy arrangements approach aims to elucidate change and stability of policy arrangements by analyzing the interaction between everyday policy practices and the overarching structural processes of "political modernization" such as individualization and Europeanization. Every day policy practices are described with reference to four dimensions: discourse, which relates to content; actor coalitions, resources and rules of the game, which relate to organization or in other words process. The assumption is that these four dimensions can help clarify how change—or indeed stability—comes about in policy arrangements. In the research on

which this paper is based, the dimensions are used as "sensitizing concepts" (Blumer 1954), which means that they provide guidelines as to what to focus upon but do not impose narrow definitions.

Methodological challenge

The four dimensions pose a methodological challenge because the dimensions require that they be distinguished from each other. This is not a new problem in scientific theory and methodology. This can be explained with sociologist Anthony Giddens' "Structuration Theory." Structuration Theory has been an important inspiration for the policy arrangements approach, which involves a similar methodological challenge. Giddens (1984) claims that too many attempts to explain social change have focused on the behavior of actors or on the potential and limitations that structures such as rules and resources provide or impose. He asserts that these possibilities or impossibilities come about through an interaction between the two, and that there exists a "duality of actor and structure." Neither the actors nor the structures are omnipotent. There has been serious debate as to the feasibility of researching the interaction between actor and structure: if they influence each other so much, how can we distinguish between them (Archer 1995, Stones 2001)? What becomes of the time dimension if actor and structure cannot be differentiated in terms of time (Archer 1995, 1996)? Here the relationships between the four dimensions are looked at from the point of view of Archer's "analytical dualism" (Archer 1995, 1996). Analytical dualism means that actor and structure should be treated as distinguishable. According to Archer, it is only in such a way that the relationship can be studied at all. The policy arrangements approach elaborates the duality of actor and structure in two ways. It does so first by means of the four dimensions which together form everyday policy practices. Obviously, "actor coalitions" represent Giddens' actor or agency. Discourse coalitions, rules and resources stand for Giddens' structure. Together, these four dimensions shape a policy arrangement. Second, the policy arrangements approach elaborates the duality in terms of the interaction between these everyday policy practices and structural processes. In conclusion, the methodological challenge that follows from Giddens' "duality of structure and agency" is inherent to the policy arrangements approach as well, but by looking at the four dimensions as related, but distinguishable entities (i.e. analytical dualism), this challenge can be met.

The following sections explain the four dimensions and then continue to specify and explain the assumed structural process, sub-politicization, that is the focus of this paper.

Four dimensions to understand day-to-day policy practices

The main message behind the concept of discourse is that social reality is not neutral; it is given meaning in many different ways. A commonly used example of this concept in discourse theory or discourse analysis is about a forest.

"A forest might be an object of intrinsic natural beauty, an obstacle to the building of a motorway, or a unique ecosystem, depending on the horizon of classificatory rules and differences that confers meaning to it." (Howarth 2000: 9)

Discourses, also known as systems of social relations according to Howarth (2000:8), do not stand on their own. They are organized into historically formed rules, into the allocation of resources or into the way in which actors form coalitions. Therefore, rules, resources and actor coalitions form the other three dimensions of the policy arrangements approach in addition to discourse. These other three dimensions refer to the practices in which discourses are embedded. Actor coalitions are people or organizations which join forces around a certain discourse: in other words they form a "discourse coalition." The concept of resources encompasses all resources necessary to achieve a goal, for example money, knowledge or number of members. Achieving the goal can be very difficult, if not impossible, if there is a shortage of resources or if a certain group lacks access to resources. The "rules of the game" are the formal and informal rules which influence the process and are used by the actors in all of their activities.

To look at discourse in relation to these three practices—setting rules, organizing resources and forming actor coalitions—bears resemblance to a Foucauldian type of discourse analysis. Authors who have been inspired by the French philosopher Michel Foucault argue that the analysis of discourse should not just be a linguistic affair but should also include the study of what they call discursive practices. Otherwise discourse analysis does not facilitate a deeper understanding of political action (Hook 2001, Hajer 1995). This understanding of discourse, not just as a linguistic concept but also as something institutional and practice-related, makes it possible to pursue an enquiry into the meanings, the hidden conceptual frameworks and the consequences of these for institutional practices, as well as into the way that these practices in turn influence the conceptual frameworks. (For an overview of approaches to discourse analysis and an application to global forest policies see Arts and Buizer, 2008.) Following these theoretical lines of thought and the accompanying concepts, the empirical data from the cases needed to be interpreted in terms of these questions: what discourse prevailed in the relevant forest policies at different levels and what discourse prevailed in the

initiatives? What practices, in terms of coalitions, rules and resources, went along with these?

Structural process: sub-politicization

The focal concepts which were used in the analysis and explained above do not provide answers with regard to the question of how day-to-day practices—as they are described by means of the four mentioned dimensions—relate to more general structural processes. There are a great many structural processes, such as individualization, globalization, commercialization, etc. Ulrich Beck's sub-politicization theory is a natural choice to uncover the factors influencing the development of both the policies and the initiatives and to understand the possible broader impacts of local private initiatives in a multi-level policy context. According to Beck, it is in the context of the present day risk society that sub-politicization takes place. In Beck's own words, this means that "There are even opportunities for courageous individuals to 'move mountains' in the nerve centers of development" (Beck 1994: 23). Centralized management takes a back seat, and consumers can wield an influence through their spending power, as they did for example during the discussion about dumping the Brent spar oil rig. Inspired by the media campaign of the environmental NGO Greenpeace, consumers decided to refrain from buying fuel from Shell, the owner of the oil rig, in order to press for onshore dismantling. Their boycott was successful: Shell decided to bring the oil rig to land. Beck argues that these are signs of sub-politicization: Greenpeace and the consumers unveil the lack of power and legitimization of the prevailing political order and start to exert direct participation in political decision-making (Beck 1996, 1997). Other observers speak of political displacement or dispersion (Engelen and Sie Dhian Ho 2004). The formal representative system that has long been established in the Netherlands is no longer the only political arena; instead, political ideas have begun to emerge from many other places as well. This paper examines the two cases in the light of this posited political development and asks this question: how exactly do the cases exemplify sub-politicization?

In short, the main aim of the research is to expand understanding of innovative, local initiatives by private actors and their interactions with established policies. In this paper the more specific question is how two local initiatives to effect change in land management and design interacted with operative mainstream forest policies and with what results, both in the two areas as well as in a broader context.

3. The main results

Although there were differences, there turned out to be several striking similarities between the cases. The most salient of these similarities is the way that the cases reveal the great potential for innovation among private parties. Getting their ideas onto the agenda and ensuring they were carried through required a lot of stamina, creativity and adaptability. Without these driving forces, it would not have been possible to obtain the necessary authorization and financing. In contrast to the question often posed within government as to how to stimulate support among citizens for policy implementation, these examples suggest that the real issue is how to involve governments in realizing the wishes of coalitions of private parties.

The following summarizes the results of the study organized by the following themes:

1. Interactions between initiatives and established policy (in terms of relationships between discourse, actor coalitions, resources and rules of the game)
2. Sub-politicization and depoliticization
3. Perseverance, trust, empathy and other social-relational factors

Interactions between initiatives and established policy (in terms of relationships between discourse, actor coalitions, resources and rules of the game)

Although in different ways, both initiatives stemmed from the wish to approach the design and management of a public space in a manner that was not possible within the terms of existing policy. Both cases also had a history of years of unresolved conflict. In the Biesland case, there was an impasse over the conversion of part of a polder—a low-lying piece of land in which water levels are artificially managed to suit agricultural land use—into forest, a plan which formed part of broader greenstructure plans (Randstad greenstructure and Green Blue Streamer). The farmer and a nature conservation volunteer believed that they could create a natural environment that would be attractive to city-dwellers and did not see the need to buy up agricultural land for forest development. In the Loonsche land case, there was a conflict between the Efteling and nature conservation organizations over the building of holiday accommodations. A legal battle was fought right up to the Council of State, contesting the harmful impact of the building plans and the accompanying compensation rights and obligations. In other words, these initiatives

did not come about in a policy vacuum, but in reaction to a policy.

When considering the cases from the perspective of the relationships between discourse, actor coalitions, resources and rules of the game, a number of features become clear. First, there was a lot of potential in terms of discourses and coalitions, with new coalitions being formed and various discourses co-existing. In other words, it was a discursive space, fostered by new coalitions of both non-government and government actors. The divisions did not necessarily exist directly between government and non-government. In fact, the study has revealed the need for greater subtlety in differentiating between them. Civil servants who are involved in the field were particularly active in their efforts to promote these initiatives, even outside of working hours. Their dual role was often very fruitful.

In Biesland, three discourses were very important. The well established nature-oriented or "green structure" discourse and the strong internal market discourse turned out to reinforce each other with regard to who would, and who would not, be perceived as capable of managing nature. Alongside these two, a new approach grew up in which the qualities of the area were central and which managed to combine the priorities of agriculture, nature conservation and access to the area for city-dwellers. In this context, and in defiance of the fear of unfair competition which was firmly embedded in the European policies, the farmer could be paid for his nature conservation activities, such as a closed nutrient cycle. Discourse and coalitions were therefore flexible and could co-exist or even overlap each other.

The flexibility of the rules of the game and resources was much more limited, however. In order to keep the process moving, the content of the initiatives was partially adapted to comply with existing rules. Biesland provides a clear example of this: in the final EU directive approving implementation of the measures, a number of provisions were included which ensured that the initiative broadly tied in with established policy. Similarly, in the Loonsche Land case, initial approaches thought in terms of the area as a whole and of combining various different interests. These approaches were sacrificed to thinking in terms of "compensatory hectares." This compensation discourse required that for every square meter of trees of a certain age that was felled, 1.66 square meters of trees would need to be newly planted. While this may be perceived as a strong policy in favor of a weak sector, it nonetheless created situations in which there was little motivation to think from the perspective at the other side of the table or to look for alternatives which would perhaps be preferred by both developers and nature organizations, for example achieving a

higher nature value together with building and development activities. The push to translate results into compensatory hectares facilitated approval of the initiative by policymakers, but it also made it more difficult to encourage a new way of thinking. As a result, some of the essential elements of the original idea did not gain a foothold, and there remained an asymmetry between the flexibility of discourses and actor coalitions and the inflexibility of resources and rules of the game. In the end, the existing distribution of resources and the operative rules of the game continued to be geared to buy up land to give it to nature organizations (in Biesland), and to compensate nature values in a way that had led to lengthy legal procedures and not to pro-active collaboration between developers and nature organizations (in the Loonsche Land). The main point here is that this asymmetry significantly reduces the chances of the initiatives being able to prove their worth in a wider context, even though the perseverance, efforts and courage of the initiators has enabled them to achieve their goals within their own areas.

Sub-politicization and depoliticization

The question now arises as to what type of politicization is occurring in these examples. Obviously, Biesland and Loonsche Land are interesting cases in terms of Beck's theory of sub-politicization. Firstly, it is clear from the analysis of the relationships between discourse, actor coalitions, resources and rules of the game that new coalitions of actors create a new discursive space in which they can develop and implement their ideas. This discursive space mainly comes into being in places outside the formal representative system. This does not mean, however, that there is no role for the municipal council or even for parliament: sometimes these institutions can provide just the right support at a crucial juncture. Yet the ideas for these initiatives were largely developed outside of these formal political arenas; they evolved around a farm kitchen table in Biesland or in a workshop on the golf course at the Efteling. What is most striking about these cases is the way people organized themselves, formed new coalitions and developed a new language in order to gain influence over land use and management of the areas.

However, these cases also demonstrate a tendency that would seem to run counter to the trend towards sub-politicization, namely "depoliti-cization." The core ideas in these initiatives—the possibilities for farmers to manage nature in new ways in Biesland or opportunities to combine holiday accommodation with nature conservation in the Loonsche Land—were often sidelined by

the conditions prevailing in the system. As a result, procedural detail set the tone for the process.

There was a simultaneous process of inclusion and exclusion. The process was inclusive in the sense that the initiatives, even if in modified form, did get a chance to be implemented at local level and show their value; it was exclusive in the sense that the ways in which the initiatives intended to bridge the constraining distinctions that were part of mainstream policies, such as the distinction between nature and forests on the one hand and agriculture on the other hand, between city and countryside, and between nature and constructions projects, were not debated. Based on this observation, it is possible to further refine the sub-politicization theory. The fundamental political implications of the issues at stake were not made explicit, and non-governmental actors had no access to joint decision-making—or even simple discussion—about the issues. The same problem can be seen in the way that legal jargon gradually became dominant as the content of the initiatives shifted in the direction of the established arrangement. There was also a sustained decrease in face-to-face contact between actors. These depoliticization mechanisms led to experiences loaded with negative emotions among the initiators and their supporters, who operated at a distance from the procedures concerned.

Perseverance, trust, empathy and other social-relational factors

The fact that the initiatives did bear fruit, in spite of all obstacles and even though the content was partially adapted to established policy, has a lot to do with a dimension that has not yet been explicitly mentioned here: social relations. Perseverance, trust and empathy may be viewed as aspects or features of the actor dimension, but these social-relational factors deserve special attention. The trust nurtured through the actual contact between people who developed a feeling for a place during their time in the field made it possible to build up long-term relationships. The cases demonstrate various situations in which personal contact on the basis of mutual trust survived quite difficult confrontations. Furthermore, trust grew in the course of intensive collaboration. Stamina, skills in dealing with conflicts, and empathy fostered by face-to-face contact made it easier for those involved to persevere and continue the process to completion. Personal friendships developed, and participants were inspired to continue forward because they were sharing pleasures, disappointments, the feeling of powerlessness and indeed of the sense of combined power.

However, as soon as the chances of implementation of the initiative or emergence of space for policy innovation grew, the discussions shifted to the level of legal and financial-technical issues, which were very different from what had been important in the field. There was less face-to-face contact too, notwithstanding that the importance of personal contact was repeatedly stressed. In the course of the process, it took more and more creativity on the part of the initiators to find ways of applying their own rules of the game about contact with other actors the field.

Distance between civil servants and people in the field was a particularly significant factor. For example, major final decisions were usually taken by civil servants who did not know the situation in the field, sometimes in locations as far away as Brussels. Furthermore, civil servants regularly change jobs in policymaking ministries. This had drastic implications for the Biesland case since there was frequently little time to build up trust between governmental and non-governmental actors. In contrast, civil servants who did stay in one post throughout the process contributed a great deal to the continuity of efforts: they took on the initial ideas, helped to develop them further and stood their ground, sometimes against their own colleagues. Where there was contact with other actors, these relationships bore fruit in the form of taking the initiatives further. The frequent changing of the guard was very frustrating for the initiators at times, because they repeatedly had to invest in new relationships. Furthermore, a "not invented here" attitude—where actors disclaim ownership of a process if they did not initiate it—hindered the transfer of knowledge about the idea within the organization. The current policy of frequent changes of job is problematic if governments want to ensure that initiatives for policy innovation can come from non-governmental sources as well as from the government.

Clearly the social-relational factors in relation to operative rules of the game need to be considered in order to reach a better understanding of policy innovation.

4. Conclusion

In the field of forest and nature conservation, it is essential that researchers look for local initiatives that are not yet bogged down by established policy. The research presented here suggests that there seems to be plenty of potential for local initiatives, but that the translation of that potential into public discussion of possible improvements to government policy seems to lag behind. In the specific cases studied here, alternative options to existing forest policies were proposed; these were options which could possibly have engaged a wider range of actors to take responsibility for design and management of green space. However, they did not become a topic of wider political debate.

This created a situation where discursive space was at odds with immovability of rules and resources and discourse embedded in these. In this sense not only sub-politicization but also depoliticization were present. This study sheds some light on why this is so. For the time being however, the space for policy innovation is to be found in the discursive space that is created by new actor coalitions. The role of social relational factors such as empathy, perseverance and trust, and also feelings of identity and "not invented here" sentiments should get attention, in addition to the role of discourse, actor coalitions, rules and resources.

This paper does not provide answers with regard to how to deal with asymmetries such as the ones presented here. However, it presents several key issues and questions that should be part of discussions about them. Some of these questions are very concrete: what are the consequences of the distance from the field and the habit of frequently transferring civil servants from one post to another? Does this distance contribute to a lack of political discussion over the implications of a local initiative for existing policy? If trust, empathy and perseverance emerge chiefly from situations in which there is personal contact, what are the implications for a policy of remote control? In view of the multi-level context in which local initiatives mostly come about, how can European regulations, with their own specific embedded discourse, substantially be debated at local level without procedural detail setting the tone? Other questions are more general: if a shift in the content of a local initiative towards established policy is a condition for realizing the initiative, is that desirable? How can the considerable local potential for innovation observed during this study generate wider policy implications? What could that mean for the contents of forest policies? And importantly, how can politicized discussion about the contents of policies which are initiated from below be connected to the formal representative system?

These issues deserve to be addressed and discussed more often by researchers, policymakers and practitioners in order to bridge the divide between established policy and the wealth of ideas generated by local private parties.

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Evaluation of the institutional structure of sustainable forest management in the Netherlands

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Abstract

The aim of this paper is to evaluate the existing Dutch institutional structure on sustainable forest management (SFM). The evaluation was performed using criteria and indicators that were based on the four-dimensional structure (discourse, rules, power, and actors) of the policy arrangement approach. The data collection and analysis was done with a case study approach. All indicators show that the governmental capacity of the SFM arrangement is high. Most actors understand SFM in a similar way while accepting that different actors may emphasize different aspects of it. Some focus more on the economic functions of SFM while others focus on the nature conservation function. The SFM regulations (or interaction rules) are well known and not coercive, and are accepted by the respondents, likely resulting in enduring behavior change. The government and the actors who support the governmental SFM vision are powerful. Furthermore, the relationships between actors are positive and trusting. Given this high governance capacity, it is likely that the policy will be able to effectively realize its goals of sustainably combining the ecological, social and economic functions in most forests.

1. Introduction

The concept of sustainable forest management (SFM) arises from the notion of sustainable development that gained increasing recognition worldwide in the late 1980's (Wang 2004). SFM is generally defined as achieving a balance between the social, economic and ecological values associated with forest resources with consideration of those values for future generations. It is important to take into account that SFM means different things to different people, at different scales of management and at different time periods (Hickey 2008).

In addition to the focus on management, other issues are important and need to be considered: institutional issues (Cortner et al 1996, 1998); the process of consensus-building around the meaning of "sustainability;" and the process by which sustainability becomes institutionalized in rules, actor relations and power structures (Jennings and Zandbergen 1995). Although some studies have investigated these topics for ecosystem-based management (e.g. Imperial 1999a, 1999b) and community-based natural resource management (e.g. Leach et al. 1999), in general, evaluations of the SFM institutional structure are rarely conducted. The aim of our research is to evaluate the existing Dutch institutional structure on SFM. The Dutch state, i.e. the Ministry of Agriculture's division of Nature and Food Quality (LNV), has clearly formulated its definition of SFM and wants to implement this vision of SFM in most forests with regulation and cooperation from other actors. Some forests, i.e. the forests with a nature conservation focus, are the subject of another policy aim. Again, it is important to take into account that actors' understanding of SFM can differ.

In this paper we first describe a framework for institutional evaluation. Next, we provide a brief description of the case study approach our strategy for data collection and analysis which is a. Finally, we apply our theoretical framework and discuss the institutionalization of the SFM discourse with regard to rules, actor relations and power structures.

2. Theoretical framework

The theoretical framework that we use is the policy arrangement approach (PAA) (Van Tatenhove el al. 2000, Arts el al. 2006). The central concept of the PAA is an analysis of "the temporary stabilizations of the substance and organization of a particular policy domain" (Van Tatenhove et al. 2000, p. 54, emphasis added). The stabilizations are assumed to be only temporary because the arrangements are under pressure of constant change (Arts and Van Tatenhove 2004). The structure of a policy arrangement is analyzed along the following four dimensions: (1) the actors and their coalitions involved in the policy domain (organization), (2) the division of resources between these actors (organization), (3) the rules of the game (organization and substance) and (4) the current policy discourses (substance) (Van Tatenhove et al. 2000, Arts et al. 2006). These four dimensions of a policy arrangement are inextricably interwoven, implying that any change on one dimension induces change in other dimensions.

Table 1: SFM criteria & indicators for institutional evaluation

Concept	Aspects	Dimensions	Criteria	Indicator	Governance capacity requirement
Policy arrangement	*Substance*	Discourse	SFM perspectives	Similarity in perspectives	Similar perspectives or differences in perspective are accepted
			Multi-functionality		
	Organization	Rules	SFM regulation	The extent to which regulation supports SFM policy	Existence of SFM regulation and no negative effects from other land-based policies
			SFM rules-in-use	Acceptance of the rules	High level of acceptance
		Actors	Place of actor in social network	Number of mutually developed ties between one actor and the other actors	Actors who promote SFM have many positive relations with other actors
			Trust	The extent to which other actors trust a specific actor	Actors who promote SFM are trustworthy
		Power	Resources	The relative distribution of power resources between actors	Actors who promote SFM have many resources at their disposal and other discourse coalitions do not
			Reputation	The extent that other actors believe that a specific actor is powerful	Actors who promote SFM have a strong reputation and other discourse coalitions do not

The PAA has mainly been used as an analytical tool. Recently it has been introduced as a tool for evaluation to investigate the potential governance capacity of the arrangement (Arts and Goverde 2006), i.e. the extent to which new forms of governance are able to successfully mitigate or solve societal and administrative problems which are legitimately recognized by the stakeholders (Nelissen et al. 2000). A high governance capacity means that the institutional preconditions of the policy arrangement to contribute to an effective realization of the desired policy impact are fulfilled. In order to measure this capacity, Arts and Goverde (2006) borrowed the concept of "congruence" from Boonstra (2004). Capacity is high when there is sufficient coherence among respectively (1) the policy views of the different actors (strategic congruence) and (2) the dimensions of a policy arrangement (structural congruence). To evaluate strategic and structural congruence we follow the idea of Wiering and Arts (2006) to link a number of criteria, indicators and requirements to the different dimensions of the arrangement (Table 1).

The first dimension, discourse, is restricted to the actors' perspectives of the research theme, in this case "sustainable forest management." Discourse consists of two criteria: "SFM perspectives" and "multi-functionality." The former investigates the actors' perspectives of SFM in general, and the latter pertains to concrete SFM activities (see section 3). This division is important for rather abstract concepts like SFM because private forest owners might display a relatively favorable attitude towards abstract concepts such as ecosystem management or SFM, but frequently oppose the specific elements of an actual plan (Brunson et al. 1997). These indicators are used to evaluate the strategic congruence and thus the similarity in SFM discourse.

The second dimension, rules, consists of substantive and organizational aspects. The substantive aspect is the extent to which a change in forest management discourse is reflected in changes in regulation (Wiering and Arts 2006). To evaluate the criterion "SFM regulation," it is necessary to investigate to what extent the forest regulation was changed after the introduction of the SFM policy goal and to what extent this SFM regulation conflicts with existing land based policies. The organizational aspect is described by rules-in-use, i.e. the rules that individuals refer to when asked to explain and justify their interactions with other participants in an action arena (Ostrom et al. 1994). The evaluation of the criterion "SFM rules-in-use" requires an investigation of the acceptance of these SFM rules by the various actors. The governance capacity requirements for rules are the existence of specific SFM regulation, no negative effects from other land-based policies and a high acceptance of the rules-in-use.

The third dimension, policy actors, is analyzed based on social capital. Social capital is regarded as the glue for adaptive capacity and collaboration (Pretty and Ward 2001) and for effective governance systems including ecosystem management (Pretty and Ward 2001, Folke et al. 2005). Social capital is built by investing in social relationships (Scheffer et al. 2003) and is evaluated by the criteria "place of an actor in the social network" and "trust." The first criterion, "place of an actor," refers to the number of mutual ties between one actor and other actors in a social structure (Wasserman and Faust 1994). The second criterion, "trust," refers to a more or less stable perception of actors about the intentions of other actors, i.e. that they refrain from opportunistic behavior (Edelenbos and Klijn 2007). The governance capacity requirements for actors are that actors who promote SFM are trustworthy and have many positive relations with other actors.

Finally, power is a multidimensional concept with relational, dispositional and structural aspects (Arts and van Tatenhove 2004). In our research, the focus is on dispositional power. The two other power concepts are less important for our research: the focus of relational power is on the micro-level in the sense that relational power means the extent to which a specific actor achieves outcomes in relation to other actors in a specific situation; likewise structural power focuses on the macro-level. The core idea of dispositional power is that policy agents are positioned vis-à-vis each other in arrangements on the basis of rules of the game as well as on the basis of an asymmetrical division of resources (Arts and Van Tatenhove 2004). To determine an actor's power position it is important to take into account that only the relative difference in power resources is important (Goverde and Hinsen 1994). When all actors have the same quantity of power resources at their disposal, none of the actors has a competitive advantage over the others. By mapping the actors' resources it becomes clear that certain actors need each other to realize their respective goals (Liefferink 2006). However the criterion "relative power position" gives only an indication of an actor's potential power. The second criterion, "power reputation," provides a better indication of actual use; it can be thought of as analogous to fire and smoke, i.e. smoke is an indicator of fire. According to this perspective, an actor is powerful if "smoke from power" or reputation of power is perceived by other actors (Lieshout and Westerheijden 1994). The governance capacity for power requires that actors who promote SFM have many resources at their disposal and have a strong reputation of power; other discourse coalitions do not.

3. Material & Methods

The research sub-questions (e.g. "how to define the different actors in SFM") were best answered with a case study approach. Case studies are preferable when "how" and "why" questions are being asked about a contemporary set of events over which the investigator has little or no control (Yin 2003). The case study in this research project was conducted in a stepwise approach. The first step, familiarization, involved an investigation of all documents (n=29) which were related to this case and the research subject. The second step was the collection of the field data through in-depth interviews. In all interviews questions on SFM discourse (in general, wood production, recreation, reducing the use of exotic trees and increasing the amount of dead wood), acceptance of rules, possible conflicts with other land-based policies, actor relations, trust in other actors, power resources (forest area, money and personnel, knowledge, communication possibility, formal and informal authority) and power reputation were asked. The interviews were held with ten private forest owners,

Table 2: Discourse coalitions: name, members and differences from the SFM perspective of the government

Coalitions	Members	Difference from the perspective of the government
SFM coalition	• two municipalities • three forest consultancies • Forest group "Zuid-Nederland" • State Forest Service • landscape organization "Brabants Landschap" • Forest Groups Union • Forest Board	No difference
Economic coalition	• five private forest owners (>60 ha) • Federation private landownership • one estate agent	Multi-functionality: Wood production is the main function; the other two functions are possible when they have no negative effects on this main function. Exotics: Douglas and larch are important. Dead wood: No girdling.
Water harvest/ military use coalition	• two water harvest companies • Ministry of Defense • one private forest owner >60 ha	Multi-functionality: Water harvest/ military use is the main function; the other three functions are possible when they have no negative effects on this main function.
Nature coalition	• Natuurmonumenten	Multi-functionality: Nature conservation is the main function; recreation is possible when there is no negative effect on the main function. Wood production: No target.
Local use coalition	• four private forest owners (<30 ha)	Social function: Forest is garden. Economic function: Wood for own use. Exotics: Only invasive exotics must be suppressed. Dead wood: No girdling.
Timber coalition	• three timber merchants	Exotics: More important than indigenous. Dead wood: No girdling and can be dangerous. Wood operations: Prefer former clear-cut system.

Table 3: Respondents' familiarity and acceptance of policy instruments

Instrument	Aim	Familiarity	Acceptance
Forest Act	Maintain forest area	High	High, even praised
Flora and Fauna Act (including behavior code)	Protect plants and animals	High	Very low by timber merchants Low by many private owners Accepted by most organizations
Grant scheme Nature Management 2000	Provide financial support for nature and forest management	High	Idea is accepted, but control system is too rigid and the financial difference between the plus and the basic package is too low
Estate Act	Tax advantages	High	High
Economic part of provincial scheme	Provide financial support to develop SFM plan	High	High
Communicative part of provincial scheme	Promote SFM and capacity-building	High	High
Communication project on SFM by the state	Promote SFM and capacity-building	Low	The idea is accepted, but this specific project was not well executed

four public owners (two municipalities, Ministry of Defense, State Forest Service), two nature NGO's ("Natuurmonumenten" and "Brabants Landschap"), two water collection companies, three forest consultants, one estate agent, three wood merchants, the Ministry of Agriculture, Nature and Food Quality (LNV), the Forest Board (a lobby organization which unifies all forest and nature stakeholders), the Federation Private Landownership (FPG), the Forest Group Union and the Forest Group "Zuid-Nederland" (a cooperative organization of forest owners). In addition, it was important to interview the province of Noord-Brabant, but the province refused to cooperate.

4. Results

We first provide the results for strategic congruence, i.e. similarity between SFM perspective of the government and the different actors (discourse). Next we present the results for structural congruence, i.e. sufficient coherence among the dimensions of the SFM policy arrangement (discourse, rules, actors, power). Each section concludes with an evaluation of governance capacity.

4.1. Evaluation of strategic congruence

4.1.1. Discourse coalitions

With regard to SFM, the Dutch state (LNV) emphasizes an integration of social, ecological and economic forest functions at the forest stand level. LNV wants to convince forest owners to use indigenous tree species, to increase dead wood in their forests naturally or even with silviculture techniques such as stem girdling, to increase the public accessibility of their forests and to improve recreational quality. The economic function of the forest is important for several reasons: the LNV encourages domestic wood production over imports, the economic function serves as an SFM steering mechanism, and the forest is an important source of income for many private forest owners. However, as mentioned before, this multifunctionality is not a goal for all forests; there are also forests managed for nature conservation. This LNV SFM vision can only be realized in those instances where other actors agree with the state's vision. By analyzing similarities and differences between actors' SFM perceptions, we distinguished six discourse coalitions. Table 2 describes the different discourse coalitions.

4.1.2. Evaluation

To have a high level of strategic congruence, differences in perspective between the government and other actors must be small. The SFM coalition has the same SFM perspective as the government and thus congruence is high. The same goes for the economic and the water collection/military use coalitions; both coalitions agree with the governmental perspective on SFM when the benefits cover the costs or when SFM does not

endanger the primary respective functions of water harvest or military use. The congruence is lower for the wood coalition, the local use coalition and the nature coalition. Nevertheless this dissimilarity is not problematic; most other coalitions can accept the different perspectives of these groups. The nature coalition, i.e. "Natuurmonumenten," fulfills the policy aim of forests with a nature conservation function. The wood coalition emphasizes the policy aim of the Dutch need for domestic wood production and the importance of exotics to fulfill this role. The difference with the local use coalition is partly a knowledge problem; already the coalition reacts favorably to fulfill the ecological forest policy objectives. Only the differences of perspective between the wood coalition and the nature coalition are significant and not completely resolved. The wood coalition deplores that "Natuurmonumenten" does not have a focus on productivity. Nonetheless, in general most differences in perspectives are small or accepted, resulting in a high strategic congruence for this case.

4.2. Evaluation of structural congruence

4.2.1. Rules

Governance capacity is high when the SFM discourse is institutionalized in clear, well known and accepted rules and when there are no conflicts with other land-based policy, which seems to be the case here. First, the Dutch state and the province of Noord-Brabant designed regulations with SFM as a main goal. Second, the respondents mentioned that there were no negative effects of other land-based policies on the SFM policy. Third, this requirement is to a large extent fulfilled for most policy instruments, as was discovered when familiarity and acceptance of the different SFM relevant policy instruments were surveyed (see Table 3). Nevertheless, the high acceptance can further be improved by an adaptation of the current grant scheme Nature Management 2000 to a scheme that has more self-regulation, is less rigid and has a greater difference in financial compensation between the basic and the plus package.

4.2.2. Actors and Power

The governance capacity requirements for the indicators "place of actor in social network," "trust," "power resources" and "power reputation" were evaluated on the level of the discourse coalition (see Table 4). All indicators have the same governance capacity requirement: the indicator value must be high for the discourse coalitions that have the same or only slightly different SFM perspective than

Table 4: Evaluation of the governance capacity requirements for the indicators "place of actor in social network", "trust", "power resources" and "power reputation"

Coalitions	Network place (actors which have positive rewarded relations with at least 50% of the respondents)	Trust (70% of respondents show a high trust in this actor)	Power resources (%)	Power reputation (70% of respondents believe that actor is powerful)
SFM coalition and LNV	Forest group, Brabants Landschap, State Forest Service	Forest group, Brabants Landschap	61	LNV, Forest Board, State Forest Service
Economic coalition	-	-	14	-
Water harvest/ military use coalition	-	-	8	-
Nature coalition	Natuurmonumenten	Natuurmonumenten	9	Natuurmonumenten
Local use coalition	-	-	0	-
Timber coalition	-	-	1	-
Province of Noord-Brabant (coalition not known)	-	-	8	Province of Noord-Brabant

the government (e.g. SFM discourse coalition, the economic discourse coalition) and low for the discourse coalitions that have a different SFM perspective (e.g. wood coalition). It is possible to conclude that these requirements are fulfilled. The SFM coalition and the government (LNV) control 61% of the power resources. This increases to 83% when the economic and water harvest/military use coalitions are taken into account. Most actors believe that the Forest Board, the State Forest Service and the government itself are powerful. In addition, the forest group "Zuid-Nederland," "Brabants Landschap" and the State Forest Service play an important role in the social network. Most actors also trust the forest group and "Brabants Landschap." In addition to the SFM coalition members, "Natuurmonumenten" and the province of Noord-Brabant are important actors. "Natuurmonumenten" scores high for network place and trust, and it controls 9% of the power resources. As mentioned before, this is not a problem because almost all actors know and accept that this organization realizes another governmental aim: managing forests for nature conservation focus. Finally, because the provincial official of Noord-Brabant refused to cooperate, it is unknown in which coalition the province will be. This can be important because the province of Noord-Brabant controls 8% of the power means and has a strong reputation.

4.2.3. Evaluation

The structural congruence—coherence among the dimensions of the policy arrangement—of the investigated case is high. The SFM discourses are institutionalized in clear, well-known and accepted rules. All actors of the SFM coalition, together with the LNV, control almost two thirds of the power resources. Two of the members of the SFM coalition (State Forest Service and the Forest Board) and the Dutch state enjoy also a high reputation in the local network. In addition, some of the SFM members are trusted and esteemed actors. There are also no negative effects of non-SFM coalition members.

5. Conclusions

All indicators show that the governmental capacity of the SFM arrangement is high. Most actors understand SFM in a similar way and accept that different actors emphasize different aspects of SFM. Some focus more on the economic function; other actors focus on the nature function. The relevant SFM regulation is well known, not coercive and accepted by the respondents. The government and the actors who support the government's SFM vision are powerful. Furthermore, several of the SFM members are trusted and esteemed actors. Given this high governance capacity, there is a high

probability that the policy objective of combining ecological, social and economic functions in a sustainable way can be successfully implemented in most forests.

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Chapter Seven
Science in policy making: The eucalyptus debate and villagers in Thailand

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Abstract

In policy making, different actors in various cases compete over distinct interests and values. Particularly in cases where problems and goals are ambiguous, the policy process is prone to manipulations in order to control outcomes. How are scientific debates utilized in the manipulation process? What are the missing elements in such a process? Given that science is not neutral, how can we more wisely involve science in the policy making? This paper tries to answer these questions by examining the case of the "eucalyptus debates" and the policy of industrial plantation in Thailand. Facing severe protests sparked by land conflicts, the state and private industry introduced a "farm-based" production system by rearranging the institutions, policies and strategies regarding eucalyptus planting. At the same time, they created an official discourse that claimed that eucalyptus itself had no ecologically harmful effects. Through de-contextualization and legitimization, science contributed significantly to this discourse and was manipulated to sustain conclusions beyond what it could support. Nonetheless, the villagers' negative views toward eucalyptus production and ecological problems still persisted, despite the state's efforts to emphasize the harmless nature of eucalyptus. As this case demonstrates, science is vulnerable to politicization in policy making, particularly when its goals and methods are unclear and power relations among actors are biased. Nevertheless, the author does not deny the important role of science in making better policy. In order to avoid the problems identified in this paper, scientists should make efforts to recognize and integrate different "rationalities."

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1. Introduction

In policy making, different actors in various cases compete over distinct interests and values. In such cases, science or the scientific way of thinking tends to play a key role in the process by putatively providing neutral or objective judgments. However, recent studies on science, technology and policy issues suggest that science is neither neutral nor objective but instead creates certain political discourses (e.g. Hajer 1995, Forsyth 2003). Some authors also criticize the top-down nature of science and scientific studies for neglecting the standpoint of less-advantaged citizens, such as women and the poor in the third world (Harding 2008).

Furthermore, scientific implications are sometimes interpreted differently by each party in the policy making process and deviate from the direction that scientists originally intended. Particularly in cases where problems and goals are ambiguous, the policy process is prone to manipulations in order to control outcomes (Zahariadis 2007). How are scientific debates utilized in the manipulation process? What are the missing elements in such a process? Given that science is not neutral, how can we more wisely involve science in the policy making?

Forest and natural resource management policy in developing countries are good cases for considering the questions above (e.g. Forsyth and Walker 2008). This paper tries to answer these questions by examining the case of the "eucalyptus debates" and the policy of industrial plantation in Thailand. In Thailand, as in other places, forest and natural resource management policy seek dual goals: attaining sustainable resource use—often meaning sustainable industrialization—and improving

people's welfare. These goals are sometimes not achievable simultaneously and are often at odds; achieving both is sometimes not possible. There are also competing explanations for the cause of resource depletion problems as well as proposals for solutions. The problems over eucalyptus planting are not exceptions. There have been continuous social conflicts and ecological debates over the use of eucalyptus trees to reforest Thailand.

In the following section, the author first overviews the history of the introduction of eucalyptus in Thailand, the accompanying social conflicts and subsequent policy changes. Second, the author highlights the ecological debates over eucalyptus—one of the major battlefields in the disputes—and examines how the state created official framing of the debates by employing a supposedly scientific way of thinking characterized as "de-contextualization." Third, based on field observations and interviews, the author introduces farmers' attitudes on eucalyptus trees as a different rationality. Finally, the prospects to move beyond polar rationalities and a potential role of science are briefly discussed in the conclusion.

2. Eucalyptus Planting, Social Conflicts, and Policy Change in Thailand

Eucalyptus is a genus of tree that is naturally found in Australia and its neighbors. It is fast-growing, regenerates by coppice and is a source of raw material for various industrial products such as pulp and paper, timber, fiberboard, plywood, fuelwood, oil and others. The recorded introduction of eucalyptus in Thailand was in 1941 (Pousajja 1996). After long years of growth tests, the Royal Forest Department (RFD) decided to promote *Eucalyptus camaldulensis* since it can adapt to diverse environments in Thailand. Therefore the word "eucalyptus" or "*yukaliptat*" in Thai generally refers to this species.

During the 1980s and 1990s, the planted area of eucalyptus in Thailand rapidly expanded, particularly in the east and northeast regions. The production has been utilized primarily as raw material for pulp, while a part of it is used in the urban construction pole market. The total planted area in the country increased remarkably from 62,000 ha in 1985 to 350,000 ha in 1995. [See Uraphiphathanaphong *et al.* (undated) RUAB and FRC (1997), for the total area and the area planted by private sector in 1985, and the total area in 1995, respectively. Unlike other agricultural commodities, there are no official statistics on

eucalyptus plantation area which include villagers' spontaneous plantations.] Planting by peasants has been especially vigorous. Some reports claim that small farmers have planted over 64% of the total eucalyptus area (Barney 2005).

Plantations of eucalyptus have been targeted as a major battlefield by many NGOs and grassroots organizations. This is largely because of land conflicts between RFD and villagers. In Thailand, forests belonged to the state and were managed exclusively under the legal system. As a result of the rapid designation of national parks and national forest reserves (NFRs) on one hand, and the commercial crop boom during the 1960-1970s on the other, millions of villagers came to live in the NFRs or national parks, and they were viewed as "forest encroachers."

Facing rapid forest depletion, the policy makers drew up the National Forest Policy in 1985. Its aim was to recover 40% of the total land area as forests, consisting of 25% as production forests and 15% as conservation forests. In order to reforest the country, it encouraged the private sector to participate and establish production forests. Degraded NFRs were leased to private companies at a reasonable rate. As a result, many pulp and paper companies rushed into the reforestation businesses by acquiring as many degraded NFRs as possible. When the reforestation plan was implemented, villagers were immediately treated as illegal forest encroachers. Their land for cultivation or communal land was seized for eucalyptus planting, and in the worst cases, they were scheduled for eviction. The government supported this process both implicitly and explicitly. These hard-line approaches sparked strong resistance among villagers and NGOs during the late 1980s and early 1990s.

These social protests forced the government and private firms to reconsider both their strategy for supplying raw material and the underlying forest policy. A cabinet resolution of May 15, 1990 blocked the leasing of NFRs for tree planting by private firms. In the Seventh National Economic and Social Development Plan (1992-1996), the reforestation target of the 1985 National Forest Policy was revised to 25% for conservation forests and 15% for production forests. Furthermore, on September 8, 1992, another cabinet resolution specified five conditions for tree planting in NFRs by the private sector, which included a restriction on the total area covered by planting plots to less than eight ha per household (Hatakeyama 1993). Under these conditions, the government finally included eucalyptus in the list of eligible tree species for promotion in September 1993 (Kuaycharoen 2004).

Consequently, the government came to promote small-scale tree planting by villagers, while it trod warily on large-scale tree planting by private firms. The firms also switched from a

plantation-based strategy of establishing their own large-scale plantations to a farm-based strategy under which villagers were either encouraged to plant raw material or wherein it was simply bought from them.

3. Ecological Debates over Eucalyptus by the State

Apart from land disputes mentioned above, there was another important debate about ecological impacts that affected policy on eucalyptus planting. At the time, there was a broad discussion on these issues not only in Thailand but in other countries, such as India (Raintree 1991). It was said that there are some ecological risks posed by the cultivation of eucalyptus trees (Shiva and Bandyopadhyay 1987). Their high water and nutrient consumptions may affect crops nearby, and in more harmful cases, lead to soil degradation and a drop in groundwater level (FAO 1988). These considerations added an important question of the socio-ecological costs in eucalyptus planting, particularly in large-scale plantations. However, others experts, while admitting that there are ecological risks under certain conditions, counter-argued that there was not enough scientific evidence to support such claims (Davidson 1985).

Studies in Thailand also showed mixed results. For example, Craig *et al.* (1988) reported significant crop losses near eucalyptus trees in paddy fields in northeast Thailand. On the other hand, the RFD insisted that such effects were minimal and did not differ from other tree species. According to the report by the working committee on research on this issue, a study by the RFD research team shows that there was no significant difference in terms of the effects on soil and water conditions in the initial phase (0-4 years) between *Eucalyptus camaldulensis* and another fast-growing tree species (*Acacia auriculiformis*) (RFD undated: 12-15). It argued that eucalyptus planting is less ecologically harmful than cassava cultivation, a competitive crop to eucalyptus. It even pointed out that eucalyptus planting can be ecologically beneficial on degraded land, although the report admitted some ecological risks of eucalyptus planting under specific conditions and the need for some care (RFD undated). These conditions include planting too close to cultivated crops, which may lead to crop losses, or too close to water sources, which may cause water level to drop, or under dry conditions with annual rainfall less than 750 mm, which inhibits infiltration of allelopathic chemical in its dead leaves (RFD undated: 32).

In response to settle such polarized arguments, the Food and Agricultural Organization of the United Nations (FAO), Regional Office for Asia and the Pacific held a consultation with experts on this issue in 1993 at Bangkok. This was done on a purportedly scientific basis with forestry experts. According to the participant list in the report of the consultation, there were 82 total participants of the consultation, from 15 countries in Asia and the Pacific plus from international organizations, of which 29 were from the state forestry offices and researchers in universities, 14 from state/private companies, eight from international/bilateral aid organizations not including FAO, 13 from FAO offices and projects, two from mass media, and 16 from NGOs and others (White et al. 1995: 159-170). Biophysical, environmental, social and economic impacts of eucalyptus planting and policy issues were discussed thoroughly for five days.

As a result, the participants acknowledged some of these negative impacts. These include 1) nutrition, water competition and allelopathic effects with crops nearby under dry conditions of less than 1,200 mm annual rainfall, particularly that of less than 400 mm, 2) social and economic injustice against villagers, 3) loss of villagers' benefits e.g. non-timber forest products from degraded forests by their replacement to plantations, and 4) loss of biodiversity compared with natural forests. Many of these, particularly 2-4, are according to Kashio (1998), not specific problems of eucalyptus itself, but of tree plantations in general or socioeconomic conditions which the country faces. At the consultation, several recommendations were made by the experts: the need for more participatory approach to plantation management; the need for forest policy reforms and considerations of existing land tenure; the importance of special attention to water competition, soil nutrients and allelopathic effects under dry conditions and soil erosion; the importance of not replacing undisturbed natural forests, yet the recognition that eucalyptus plantations have higher biodiversity than many types of degraded lands. Finally, the report concluded with the following statement on the root cause of the eucalyptus debate:

> "There is now recognition by all who attended the consultation that the problems and conflicts formerly blamed on species of the genus *Eucalyptus* arise more from the intensive application of government policies on afforestation and from social justice than from the eucalypts (*Ibid.*: 148)."

This statement might be reasonable from a scientific point of view. However, beyond the scientific arguments, the consultation was important in the following two senses. First, it provided a profound base of legitimacy for state agencies,

private companies and aid organizations to further promote planting eucalyptus. For instance, shortly after this consultation, the internal committee of the Japan International Cooperation Agency (JICA) reached a similar conclusion on this issue and gave a green light to continue support for planting projects (JICA 1993). [See Kami Parupu Syokurin Mondai Network (1994) about the Japanese NGO's critics to this response.] Similarly, the attitude of RFD on eucalyptus (RFD undated) was reinforced by the statement from the consultation, even though the statement ostensibly implied more policy reform. In fact, risk factors that the consultation pointed out did not seriously affect their promotion policy. For instance, no cautious comments are written in the RFD's homepage on eucalyptus planting, part of RFD's private reforestation division homepage. In effect, the consultation simply endorsed existing strategies.

Second, the above statement was the product of de-contextualization of eucalyptus from its broader social, economic, and political context. Ecological factors are separated from the other factors and independently examined. The scientific way of thinking by the experts, particularly reductionism, did matter. Interestingly, one of the FAO officers at the time who was actively involved this consultation made a reflection on the matter:

"If someone argues for a ban on knives because they can kill people, everybody gets angry as this is an absurd remark. Planting eucalyptus also has some elements that offer some socioeconomic demand. We should not exclude rational thinking to utilize its advantage and overcome its shortcomings." (Kashio 1998: 244, translated by the author)

Though it might be scientifically rational, this metaphor of the knife clearly shows the effect of de-contextualization. By disconnecting eucalyptus from its social, economic and political issues, the pros and cons of eucalyptus were scientifically rationalized factor by factor, thereby successfully creating a set of policy recipes that conferred legitimacy on eucalyptus planting. Furthermore, cautions or warnings about eucalyptus were not included in the promotion activities since the problems were determined not to be because of eucalyptus itself but part of the socioeconomic structure. In this way, the state and the industry created an official ecological discourse on eucalyptus planting. This was in line both with the existing policy and strategic move toward a farm-based system of production. Together with planting techniques, this knowledge was included in the RFD's training programs for villagers.

However, using the same metaphor of the knife, one may argue that the employment of the knife, i.e. when, by whom and where the knife can be used, greatly depends on the situation and context that the potential user faces. In fact, Raintree (1991: 30), one of the participants of the consultation, rightly pointed out that what was needed was "a much expanded repertoire of tree growing practices and the recognition that what we are dealing with are always the attributes of a particular *species* in the context of a particular *technology* intended for a particular *user* within a particular *socioeconomic setting* in support of a particular development strategy" (emphasis in original). The question remains, however, whether combinations of these elements really create a greater repertoire or not.

In the real world where many factors are interwoven, reductionism does not necessarily obtain a socially optimal set of choices. Moreover, there should be an understanding of the different types of rationalities held by the relevant actors. An analysis of the villagers' point of view is valuable in this regard and follows.

4. Villagers' Attitudes and Scientific Explanations

As a result of policy and strategic change toward "farm-based" systems, eucalyptus planting was accepted by many villagers during the 1990s. Furthermore, the stagnating price of cassava and a wage hike drove many villagers to plant eucalyptus trees even outside the policy and contract farming scheme. However, planting eucalyptus did not mean that the villagers came to hold positive perceptions of the ecological aspects of eucalyptus. On the contrary, many villagers believed that eucalyptus affects the water table and damages nutrients in the soil, despite the state's continual efforts to emphasize eucalyptus' harmless nature.

In contrast to the scientific discussions by the state and the industry, villagers' judgments were based on their own direct field observations or indirect information from their friends and neighbors. For instance, they heard that a crop nearby had been negatively affected. They witnessed that eucalyptus was fast-growing and very tough. Once planted, uprooting eucalyptus was very hard task because the roots grow deep, making it difficult to change crops. They claimed that weeds did not come up after trees were planted. In addition, poor growth performance, fire damage, lower profits than expected and the decreasing trend of eucalyptus price in real value after the economic crisis might have exacerbated their persisting perceptions of agro-ecological impacts.

Such information was quite common and felt reliable to villagers. In contrast, scientific information on eucalyptus provided by the state

seemed unreliable to them. For example, when asked about effect on crop yield, one grower in Chaiyaphum province who took a training course on tree planting by the RFD, anxiously replied that, "According to the training course…eucalyptus is not harmful…" (author's interview, June 2000).

The scientific way of thinking may indeed provide explanations for villagers' observations and claims. However, scientific debate most needed with regard to eucalyptus is not to identify pros and cons of it, but to provide scientific explanations of why and under what conditions villagers recognize negative ecological effects. For example, narrow tree spacing, 2m by 2m, which most villagers apply, may be one of the reasons for the absence of weeds. Improper site selection can also cause this effect, and simple crown closure can inhibit the growth of weeds. Moreover, the absence of weeds may not necessarily indicate the deterioration of soil and water. By comparing with *ceteris paribus* factor by factor, we may identify causal factors for weed absence. Such analyses, however, are almost impossible in the actual settings. More importantly, factor by factor analysis may underestimate composite effects of these factors. In contrast, villagers' rationality is more holistic, site specific and experience-based. Even though the state makes a serious effort to present scientific evidence, it would be unreasonable for villagers to consider these contingent situations. Therefore, it is hard to alter the villagers' perception by simply declaring that eucalyptus is harmless, because in this situation different rationalities are competing with each other, as Beck (1992: 29-30) argued in his analysis of a risk society.

5. Conclusion

This paper demonstrated how the state created an official ecological discourse on eucalyptus in policy making by employing science and scientific thinking; yet this discourse was at odds with villagers' experience-based knowledge.

Facing severe protests sparked by land conflicts, the state and private industry re-arranged the institutions, policies and strategies regarding eucalyptus planting. At the same time, they created an official discourse that claimed that eucalyptus itself had no ecologically harmful effects. Science, or the scientific way of thinking, contributed significantly to this discourse and was manipulated to sustain conclusions beyond what it could support. First, de-contextualization was used to separate the ecological nature of the tree from its socioeconomic context. Second, it provided the state and aid agencies with scientific legitimacy for existing projects, while acknowledged risks were not presented in the actual eucalyptus planting promotion efforts. In the discourse, the positive

aspects were emphasized, while risk factors were largely eliminated.

On the other hand, the villagers' negative views toward eucalyptus production and ecological problems still persisted, despite the state's efforts to emphasize the harmless nature of eucalyptus. This was due to a distinct quality in the villagers' rationality, which is based on individual and collective experiences. As a result, the state and industry did not succeed in creating discourses that penetrated the whole production system, while they succeeded in rearranging production to some extent by introducing "farm-based" production system.

As this case demonstrates, science is vulnerable to politicization in policy making, particularly when its goals and methods are unclear and power relations among actors are biased. Nevertheless, the author does not deny the role of science in making better policy. Scientists should make efforts to provide explanations for the phenomena that villagers witness as negative ecological effects of eucalyptus. Furthermore, some of the problems villagers faced were caused by inappropriate site selection and other techniques that were partly introduced by the state promotion program. This implies that the existing scientific way of promotion is still very weak, and some of these problems may be mitigated by introducing appropriate techniques or integration into existing farming systems and villagers' rationality. For example, the tree spacing technique promoted by the RFD (2m by 2m) may provide neither good production nor be ecologically sound. There is also room for improving productivity and sustainability by combining tree planting with existing farming practices. For example, paddy-bund planting is one of the practices that can commonly be observed in northeast region. This allows entry to smallholders with lower opportunity costs and fewer negative ecological disturbances. The authors' interviews with the villagers also indicate higher satisfaction rate with lower gross profits (Ubukata and Akarapin 2007). Technological developments that support such low-cost-low-risk strategies are likely to bear more fruit than current high-cost-high-risk approach.

Thus, if we are fully aware of the embedded nature of science and technology, the author does not deny the de-contextualization of knowledge itself. If it can be re-contextualized in certain directions, such as empowerment of people, it may create previously unrecognized combinations of a repertoire of tree growing practices. In that sense, science is not dangerous, but can be useful in policy making. Finally, the author concludes with the following: "scientific rationality without social rationality remains *empty*, but social rationality without scientific rationality remains *blind* (Beck 1992: 30 emphasis in original)".

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