Interactions among prerequisite conditions

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This chapter focuses on the interactions among prerequisite conditions, which, based on the case studies analysed in this volume, seem to support or hinder progress towards SFM. Section 4.1 describes the most important interactions among the prerequisite conditions related to policies institutions and governance, while 4.2 focuses on those related to livelihoods, capacities, and socio-economic conditions. In reality prerequisite conditions interact among themselves in various, complex, ways, and in 4.3 we draw attention to some of the main interactions across realms that seem to be important to forest cover and condition and forest-related livelihoods. In that section (4.3), the observed interactions are related to the perceived trends in forest and livelihood outcomes. The information about the perceived trends in the outcomes is based on the informed assessment of the authors of each case study. It is important to note that it relates to the particular trends observed in each specific case; it does not necessarily describe the situation in a wider area or the whole country since in several case studies the outcomes relate to specific projects.

4.1 Interactions among prerequisite conditions relating to policies, institutions, and governance

4.1.1 Synergistic interactions

Policy alignment

Positive trends in livelihoods and forest condition are supported by alignment of different sectoral policies and policy implementation. Synergies among agricultural and forest policies, the recognition of customary rights, and institutions and programmes that support sustainable local-level forest management are related to reported positive trends, for example in the case studies from Acre, Brazil [1], and Argentina [2]. In Acre, comprehensive policy and

regulatory reforms were supported by mobilising resources, extension services, credit, and links with agricultural policies that led to intensification and reduced pressure on forests. In Ethiopia [18,27], tenure changes on agricultural lands have supported forest rehabilitation by partly reducing pressure to use hillsides for cultivation. Synergies can also be observed among water and forest policies in a watershed area in the case study from Italy [27], in which maintaining forest cover is supported by compensating forest owners for the ecosystem services they provide for maintaining water quality and ground water.

Stakeholder participation and strong communal institutions

The case studies from Mexico [7,8] and Urbión, Spain [25], show how strong communal institutions with effective internal rules for regulating forest use and benefit sharing are instrumental for community-based management. These institutions also need to be formally recognised and respected. As these case studies demonstrate, strong local forest-management institutions are often based on long-term cultural and economic links to forest resources. The important role of effective participation, stakeholder cooperation, and strong organisation in SFM is also reported in the case studies from Guatemala, Peru, and Mexico [8].

Stakeholder participation is important for developing legitimate policies and programmes at different scales. Different platforms for negotiation are linked to positive outcomes at local and regional levels. In the case studies from Argentina [2] and Spain [25], the platform is provided though the Model Forest initiative that brings together different stakeholders. The cases from US PNW [10] and Canada [9], on the other hand, demonstrate how different stakeholders with competing forest values were able to come together to negotiate and agree on the use of vast forest areas.

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4.1.2 Discord among prerequisite conditions

Forest policies undermined by unclear rights to forests and trees

Even when policies to support and promote SFM exist, they can be undermined by unclear or unsecure rights to forests and trees (e.g. Cambodia [11], Indonesia [14,15], Ethiopia [18], Madagascar [20], Mozambique [21]) leading to unsustainable practices and weakening the legitimacy of local institutions. This often results when customary rights to resources are not legally recognised or when there is friction between the legal rights and the status of local actors, customary rights, and rule systems. Despite a shift towards recognising customary rights, the recognition of these rights is still weak in, for example, Indonesia [14,15], Thailand [17], and Madagascar [20]. In India, the constitution recognises customary rights and rules, but this has not been respected by state and national governments [13].

Conflicting policies, lack of coordination, and ineffective implementation

In many cases conflicts between forest and other sectoral policies, especially in agriculture and mining, and those seeking to promote large-scale investment in land resources undermine policies aimed at supporting SFM and local livelihoods (e.g. Argentina [2], Mexico [7], Cambodia [11], China [12], Indonesia [14,15], Mozambique [21]). Sectoral policies are often developed in isolation without considering the realities of local people, especially their reliance on livelihood strategies that often combine forest-based and agricultural activities (e.g. Madagascar [20]).

Policies to promote large-scale investments combined with lack of coordination among public-sector institutions responsible for land management often result in land-use change and loss of local communities to access to forest resources – even to displacement of rural communities. For example, as demonstrated in the case study from Cambodia [11], policies to promote economic land concessions undermine efforts to develop community forest management. On the other hand, strict and ambitious forest conservation policies can also undermine efforts to develop community-based or other local-level forest management and forest-related livelihoods, as described in the case study from Thailand [17].

As the case study from Mozambique [21] shows, ineffective implementation of existing policies can also effectively undermine development towards SFM and towards realising forest-related benefits to communities. Weak implementation and enforcement of forest legislation is also reported to undermine progress towards SFM in Bolivia [5], India [13], and Uganda [22].

In some cases the implementation of forest policies in support of SFM are hampered by institutional weakness related to ineffective and poorly funded decentralisation and de-concentration processes (e.g. India [13], Nepal [16], Uganda [22], FBIH [23]) that lead to inefficiency in the functioning of public sector institutions and high transaction costs that impede the consolidation of SFM.

Issues that undermine institutional reforms supporting community and small-scale forest management

Policies to promote small-scale and community forest management are often weakened by a moratorium or restrictions on timber commercialisation (e.g. Cambodia [11], Nepal [16], Thailand [17], Ethiopia [18], Mozambique [21], Uganda [22]). This reduces opportunities to enhance economic benefits stemming from SFM and leads to diminished interest in participating in SFM on the part of communities. In addition, demanding, cumbersome, and costly bureaucratic processes for approval of management plans and acquiring permits (e.g. Brazil [3], Bolivia [5], Mexico [7], Nepal [16], The Gambia [19], Uganda [22]), and complex contractual arrangements (Madagascar [20]) lead to high transaction costs, increase risks, and can effectively discourage community participation in SFM. Similarly, lack of stability in how forest regulations are interpreted increases risks and uncertainty regarding future possibilities to manage and benefit from forests, as demonstrated by the case study from Nepal [16]. Often, the regulatory reforms that support local forest management and forest-related development are compromised by resistance to change by the forest administration and forest officers, whose dominant views favour state-centred conservation and commercial forestry models (e.g. Bolivia [5], Cambodia [11], India [13], Nepal [16], Thailand [17], Mozambique [21]).

Lack of representation and participation

Policies that seek greater community involvement in forest management can be hampered by arrangements that limit or exclude key stakeholders from forest management and related decision-making (e.g. Canada [9], Cambodia [11], Finland [24]). As reported in the case study on the Canadian Boreal Forest Agreement [9], First Nations were not included in the negotiation process. In northern Finland, lack of effective participation of local inhabitants in forest-management planning on state-owned forestlands has contributed to conflicts.

Favourable policy measures offset by corruption and illegality

Corruption and illegal activities hamper forest-sector development in many countries (e.g. Guatemala [6], Mexico [7], Cambodia [11], Indonesia [14], Nepal [16], The Gambia [19], Uganda [22]). Lack of transparency and unfair competition reduce economic benefits associated with SFM and undermine trust. Illegality is often associated with forest loss and high grading of valuable timber species, leading to a reduction in forest quality.

4.2 Interactions among prerequisite conditions relating to livelihoods, capacities, and cultural and socio-economic aspects

4.2.1 Livelihoods, capacities, and access to capital

In most of the case studies presented, forests are important for local livelihoods. However, the contribution of forests to local livelihoods is location specific, shaped by history and culture, and it can vary among regions, communities, and often also within individual communities. This is demonstrated for example in the case study from Bolivia [5]. Prevailing social relationships within communities, such as hierarchical social stratification in Nepal [16], may interfere with efforts to institute SFM and exclude some stakeholders from forest-related decision-making, thereby weakening the possibilities that these groups benefit from forest resources.

Communities and smallholders often lack the technical and managerial capacities and financial resources needed to engage in SFM – especially in the commercial use of forest resources. For these reasons, the integration of local producers into improved market opportunities is limited or lacking (e.g. Brazil [3], Cambodia [11], Mozambique [21], Uganda [22], FBIH [23]). Capacity-building efforts and efforts seeking to facilitate access to capital are linked to improved market access and thus improved livelihood opportunities (e.g. Argentina [2], The Gambia [19], Spain [25]). As exemplified by the case studies from Argentina and Mexico [8], a combination of capacity-building, locally adapted technological solutions, and financial support have enhanced progress towards SFM.

Capacity-building and technical-assistance programmes are often dependent on external sources and have benefited extensively from international assistance. While this investment has increased capacities of diverse stakeholders, programme continuity is vulnerable to reductions in donor support (e.g. Bolivia [5], Guatemala [6], Mexico [7], Indonesia [15], Ethiopia [18], The Gambia [19], Uganda [22]). Because of the lack of long-term continuity, it is difficult to sustain capacity-building programmes that would be capable of responding to evolving needs (e.g. Guatemala [6], The Gambia [19], Uganda [22]).

In relation to wider societal changes, economic and livelihood opportunities related to SFM are evolving and diversifying from primarily timber production to alternatives such as tourism and ecosystem services (e.g. Argentina [2], Mexico [7], US PNW [10], India [13], Thailand [17], Ethiopia [18], Finland [24], FBIH [23], Spain [25], Italy [27]). These changes often result in changes in forest-related economic opportunities for different stakeholders that are accessible to some while restricting others, for example through increased controls on timber harvesting (e.g. Canada [9], US PNW [10]). In many cases the economic value of the other alternatives is already greater than traditional timber production, as for example in some regions in northern Finland [24]. In the US PNW [10] also, the importance of a timber-based economy is declining while the production of water and amenity services has increased.

4.2.2 Partnerships between communities or smallholders and companies

As the case studies from Brazil [1,3] indicate, partnerships between communities and companies may support SFM and enable communities to better benefit from forest resources, when there are clear and binding agreements that clearly define the distribution of responsibilities and benefits between the parties and when companies comply with the agreements. These partnerships can help to reduce risks, because companies are better positioned to process timber and have access to more attractive markets. However, many communities have limited capacities to negotiate or enforce agreements, and they may receive lower-than-expected income streams or other benefits (e.g. Mozambique [21]). To strengthen their position, in Brazil some communities have established cooperatives to undertake planning, monitoring, transporting, sawing, and trading of timber that originates in community-based projects.

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4.3 Interactions among prerequisite conditions across realms

The previous section emphasised the importance of situating the discussion on SFM in the specific local cultural and socio-economic reality. In addition, the extent and condition of forests are instrumental in defining the opportunities for forests to provide various products and services for local communities and smallholders and for society at large. Since variability in forest condition greatly affects the potential of communities to derive benefits from the resource, it also shapes their incentives for forest management.

4.3.1 Synergistic interactions leading mostly to positive trends

In many of the case studies analysed in this volume, the trends in forest condition and livelihoods seem to be mostly positive. They also demonstrate that the more comprehensive and synergistic the measures implemented to advance forest-related local development, the better the results. The following examples demonstrate this synergistic interaction across realms in very different situations. The comprehensive efforts in Acre, Brazil [1] provide an invaluable example of how measures in different realms interact to achieve desired impacts. The successful development was built on strong cultural and economic history and social movements that created a strong local demand for reforms. The important measures in Acre have included synergistic policies, where the intensification of the agricultural production systems was combined with strengthening the rights to forest resources; policies supporting SFM including 1) sustainable logging systems, 2) state-provided rubber subsidies, 3) environmental service schemes, and 4) investment in non-timber and timber market chains and cooperatives that provided alternative livelihoods for many extractivist families. However, even with this sustained effort, pressures on forests associated with evolving economic opportunities put this process into question, indicating that SFM is and will continue to be a challenge as socio-economic development leads to reduced dependence on forests and undermines forest-based livelihood strategies, strategies that have safeguarded forests as a productive resource in many locations.

In Quintana Roo, Mexico [7], positive trends can be associated with traditional cultural values and local community governance, as well as institutions enforcing land-use zoning and regulations for natural resource management combined with adaptive

management and technical assistance. In addition, the diversification of forest activities has supported sustainable CF by shifting the products marketed and by capitalising on other forest values and opportunities, such as payments for environmental services (biodiversity and hydrological) and ecotourism activities. On the other hand, higher deforestation rates are present among some communities due to urban sprawl and expansion of agriculture.

In the case study from northern India [13], a partnership with an NGO facilitates institutional development and the strengthening of community resource rights, empowerment, and capacity development. Based on global REDD+ strategies that created the opportunity and mechanisms for payments for environmental services, the private voluntary carbon markets now provide an effective catalyst and programmatic framework for developing resource management institutions, mapping and boundary demarcation, and long-term planning, with potential funding for mitigation, restoration, and income-generating activities aimed at reversing forest loss. The development is based on the strengthening of the traditional institutions.

In Guatemala [6], considerable efforts to empower community groups to manage community concessions for conservation and livelihood benefits, including commercial use, combined with the legal system for establishing these concessions, security of community rights, and capacity-building efforts have contributed to positive trends. Yet, capacity-building efforts have been dependent on external funding and thus lack continuity.

An agreement to protect and sustainably manage a vast area of boreal forest in Canada [9] resulted from an international campaign that raised awareness, increased diverse actors' participation, and put pressure on industry. Large-scale planning enabled the coordination of different, competing forest uses and the incorporation of local livelihood considerations and industry interests with conservation. This process has included capacity-building for many local stakeholders and technical assistance. However, the First Nations were not included in the agreement.

The case study from Indonesia [15] demonstrates positive trends from certified areas. In Indonesia, forests and forestry are placed high on the national agenda but suffer from many conflicting interests, resulting in their unsustainable exploitation. Despite forestry regulations intended to promote SFM and financial and technical support from donors and international non-governmental organisations, destructive forestry practices persist. Unclear land tenure, weak law enforcement, collusion, and corruption, as well as conflicting and inconsistent governmental regulations, remain root causes of deficiencies in forest management in the country. Certification requires that concessions resolve land-tenure con-

flicts on a case-by-case basis and requires some stakeholder cooperation in management. It has also helped promote the transition from forest exploitation to multiple-objective forest management and increased access to international markets. However, certification is not the correct instrument to address sector-wide problems.

4.3.2 Synergistic interaction among prerequisite conditions that contribute to positive trends in community forestry

Based on the analysis of five community forest management case studies that have resulted in positive trends, chapter 8 in Part II concludes that the crucial issue for positive development is the ability to respond to the locally specific context and evolving conditions in a responsible and committed way, including a long-term vision for pursuing management objectives and communities' expectations for local development. Forests are important to very important to livelihoods in all of the analysed communities. Job creation, better salaries, and investments in community infrastructure and services appear to be the main direct benefits from forest management. The following conditions are reported to underlie positive trends in the case study areas:

◆ Reforms in the policy and regulatory framework are instrumental in creating the conditions for clarifying and recognising land-tenure rights in traditional community territories. This, in turn, paves the way for communities to engage in the community-forest management process.
◆ Local decisions regarding the protection of forests and drawing of rules and control measures for forestry activities are important for empowering communities and strengthening their capacities in negotiation and conflict resolution. Cultural identity and tradition play an important role in facilitating the internal organisation for decision-making and compliance.
◆ The development of local capacities for forest management, in some cases also including enterprise development, is fundamental to the process.
◆ The forging of alliances and partnerships with governmental and non-governmental organisations is instrumental in advancing community efforts for achieving their forest management objectives.
◆ Management strengths are linked to the diversification of forest uses through technological innovation and research to add value to forest products and services. Efforts to develop value-added prod-

ucts focus mainly on lesser-known timber species and some on NTFPs with established markets. However, direct payments from environmental services are still quite limited.
◆ The access to financial resources for community-based forest management is still quite difficult, but some innovative ways of financing forestry activities for smallholders are reported.
◆ Mainly as the result of efforts by external agencies, monitoring as a management tool has gained acceptance and interest. The usual entry point consists of monitoring the impacts of commercial timber operations through post-harvest evaluations.

4.3.3 Interaction leading to mixed outcomes

Several case studies demonstrate a situation where community livelihoods are highly dependent on forests; In general, policies and regulations facilitating SFM and community management, and in some cases also the mechanisms for acquiring legally recognised rights to forests, are in place (e.g. Bolivia [5], Nepal [16], Mozambique [21]). Yet, lack of capacities of local actors and forest personnel together with cumbersome regulations for commercial use of forest resources undermine forests' potential to contribute to local livelihoods and poverty reduction. This is further aggravated by lack of policy implementation, weak law enforcement, and illegalities. In Nepal, CF has delivered some positive livelihood outcomes and facilitated rehabilitation of degraded forests. However, the regulatory framework and policies discourage timber harvesting and trade and prevent communities from fully benefitting from opportunities generated by improved forest conditions.

Similarly, in Uganda [22], efforts to encourage community forest management have been undermined by restrictions on the harvesting and commercialisation of timber and charcoal. This has been partially offset by an increase in the establishment of trees outside forests in plantations and agroforestry systems because an increase in prices for timber, charcoal, and poles has made tree-planting attractive.

The case study from US PNW [10] shows how the outcomes vary depending on the socio-economic situation and differences in the importance of forest resources to local livelihoods. An intense forest conflict resulted in a dramatic shift in forest policy in all federal forestlands from sustainable yield forestry towards increased multi-stakeholder participation, ecosystem- and landscape-focused management, and fire management. Science-based information and intensive planning exercises had an important role in the process. This shift moved the emphasis

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Figure III 4.1 Vehicle for villager's transportation, purchased with the profits of a forest-based enterprise. ©Fernanda Tomaselli

from economic values towards emphasis on conservation and contributed to the transformation of the timber industry and its importance. Isolated forest-dependent communities show growing poverty and limited economic opportunity. Many have sought to develop business capacity to undertake restoration and manufacturing of value-added wood products, but in many communities, this has not replaced the losses brought on by the transformation of the timber industry.

4.3.4 Interaction leading to mostly negative outcomes

In two case studies, the trends in relation to both forest cover and livelihoods seem to be negative (Cambodia [11], Madagascar [20], Figure III 4.1). In these cases, the rural population is still strongly dependent on forests but the rights to forests are insecure. In Cambodia, traditional use rights to forest products are recognised and the legal framework for establishing CF is in place, but capacities in both the forest administration and communities to implement CF are weak. In Madagascar, customary tenure system still prevails in some areas, but it is largely ignored by the state, which is the legal owner of all forests. In both cases, there is also a lack of coordination among sectoral policies. In Madagascar, the interconnectedness of forestry and agricultural activities and the need to develop alternative livelihood options to compensate restrictions on forest clearing

are not reflected in sectoral policies. In Cambodia, the granting of large-scale land concessions and lack of coordination between that and the establishment of community forests is undermining SFM. Illegal activities and corruption also challenge SFM in both cases.

4.4 Influences of international processes

4.4.1 Introduction

Since the UN Conference on Environment and Development in 1992 SFM has featured prominently in international forest-related policy processes and discourses (here understood as ideas and concepts). At the same time, international forest governance has developed into a complex, fragmented regime (Rayner et al. 2010) that includes both legally binding agreements, such as the Convention on Biological Diversity (CBD), and non-legally binding instruments, such as the Non-Legally Binding Instrument on All Types of Forests adopted by the UN in 2007. There has also been a trend towards increased recognition of forests' ecological and social values. In addition to timber, ecosystem services that forests provide, and indigenous and community forest rights have gained prominence on the international agenda (Arts et al. 2010). This section focuses on the influences of international processes and the related discourses on national and local policies and behaviour as reported in the case studies.

While the international processes often aim at influencing policy-making at the national level, the pathways through which this occurs can be quite distinct, depending on the context. Bernstein and Cashore (2012) distinguish between 1) international rules, 2) international norms and discourse, 3) interventions in markets, and 4) direct access to domestic policy-making processes.

4.4.2 International rules

International rules refer to the influence of legally binding agreements. The most noticeable agreements influencing forests in the case studies are the CBD and the UN Framework Convention on Climate Change (UNFCC). Except for the US, all countries represented in the case studies are parties to the CBD. Madagascar [20], for example, has implemented this treaty through the National Environmental Action Plan. A major component of this plan is to promote the sustainable use of state-owned forest resources by handing over the rights to manage forests to local communities. In the case study from Thailand [17], the influence can be considered indirect, as the conflict described in that study originated from the establishment of a national park for biodiversity conservation. In most case studies, however, this treaty is not reported to have influenced SFM at the local level.

REDD+ (referring to measures for reducing emissions from deforestation and forest degradation and enhancing carbon stocks, forest conservation, and SFM) is the instrument based on the UNFCCC, developed to transfer carbon credits between developing and developed countries. Based on the case studies analysed, it seems to be the most visible and potentially influential of the international processes affecting forests. On the one hand, REDD+ is seen to bring new opportunities to augment local forest-related development and SFM; on the other, risks and challenges related to the development of REDD+ schemes are also recognised. Several case studies report strategy and policy development and/or pilot projects related to REDD+ (e.g. Acre [1], Cambodia [11], Ethiopia [18], Madagascar [20], Mozambique [21], Uganda [22]).

The REDD+ discourse has affected federal and state policies and increased the emphasis on policies to reduce deforestation and conserve forests. For example, Mexico [7] is a REDD+ partner country and has invested in many reforestation, conservation, environmental services, agricultural intensification and community management programmes related to REDD+. Linking development and conservation to REDD+ in state development plans in, for instance, Quintana Roo is evident. However, concerns and confusion are prevalent among communities and forest civil societies on how to meet REDD+ requirements to measure and monitor carbon stocks and reduce emissions and how the potential benefits from REDD+ will be distributed.

In Acre, Brazil [1], a special incentive system is effective at the state level (Incentives for Environmental Services, Portuguese acronym SISA, effective since 2010) focusing on the conservation and recuperation of seven environmental services, including carbon sequestration and enhancement of stocks through forest conservation and management. The objective of the carbon component of SISA is recognised internationally as a sub-national REDD+ programme. It has been implemented to promote the reduction of greenhouse gas emissions from deforestation and degradation. Acre has established a state-wide deforestation target for 2020 in conformance with international standards defined by the European Union and the Kyoto Protocol. In 2010, under SISA, Acre signed a historic, sub-national memorandum of understanding with the state of California on future cap-and-trade emissions trading; and in 2012, the state signed an agreement with the German Development Bank in the amount of EUR 19 million as payment for reductions in carbon emissions already achieved due to avoided deforestation, the first state-level REDD+ initiative of its kind in the world. However, there is a lack of clear linkages between community contribution to sustainable management of land and forests and the climate change agenda under REDD+.

The case study from India [13], introduces an example of opportunities created by REDD+. It describes a community REDD+ project in which communities are responding to rapid deforestation by developing a management institution that will build the capacity of traditional governance bodies to conserve and restore ancient community forestlands. The project is financed by the sale of carbon-offset credits and through payments for other environmental services, including protection of a major water source for the state capital.

In some cases, as in Madagascar [20], REDD+ has influenced the perception of deforestation and degradation at the local level and created expectations for making money from forests. However, there is lack of understanding about how REDD+ will work at the local level and what kind of benefits, if any, it can really bring.

Several concerns relate to the development of REDD+ in developing countries. For example, in Mozambique [21], foreign private investors are acquiring large extensions of land for REDD+ projects even though the country does not yet have policies to support such projects. Also in Cambodia [11], there is a risk that REDD+ commitments could be used as a justification for further land concessions. The

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perceived increased value of forests may lead the government to exclude communities or restrict their participation in management and, therefore, diminish promising livelihood options. Similar concerns have also been expressed in relation to community forest management in Nepal [16].

For developed countries (except for the United States), the international rules are an important frame and the rules are generally followed, as for example in Canada [9] and Finland [24]. Within the European Union, many of the global agreements and processes are further included in EU regulations, with clear effects on national legislation. The European Water Framework directive, for instance, has contributed to legal changes in countries as they have started to adapt national laws according to the framework's main principles, which rest on the concept of using compensation for environmental cost as a positive economic tool to change behaviour at the local level. In Italy [27], this principle was introduced in the law and enabled the addition of an extra payment on the water bill (from 3% to 8%) to compensate forest owners directly for the maintenance of forest cover in the upstream catchment area.

BIH [23] has pursued political efforts to join the European Union and has ratified various legally binding agreements and regulations. The formal commitment to implement these obligations stands, but practical implementation has not always led to SFM or positive changes in the national forestry sector.

4.4.3 Norms and discourses

The non-legally binding instruments and global policy processes, notably the UN Conference on Environment and Development in Rio de Janeiro in 1992 and the processes that followed, increased the inclusion of ideas of sustainability and SFM in the forest legislation of many countries (e.g. Indonesia [15]).

The increasing visibility of indigenous and other local communities' forest rights in the global forest discourses and conflicts between legal and customary access to forest resources contributed to integrating community rights into national policies in some countries. The developments in Acre, Brazil [1], clearly exemplify this. The shift in the global discourse made the focus on local communities and social benefits of forests legitimate and led to the massive Pilot Program for Protection of the Brazilian Rain Forest (PPG-7) that supported widespread experimentation in forest-based development. In response to international influences and pressures, policies to support community-based certified forest management and enforcement of deforestation regulations were initiated. International, national, and

local NGOs and researchers were also influential in providing direct support to community-oriented programs and support for certified forests and payments for environmental services programmes.

The global trends of moving from government to governance, decentralisation, and increasing participation of local actors have affected to some degree the development in many case studies. These developments have led to transferring, at least to some degree, the forest management authority and related decision-making from central government to lower levels in the administrative hierarchy. These discourses have also supported different community-based or participatory forest management models. The Gambia [19] has been cited as a pioneer in implementing participatory forest management in Africa, especially in developing CF as a mechanism for transferring forest ownership from the government to local communities. In Uganda [22], reforms in public administration, including the establishment of local governments and new policy instruments, have aimed at encouraging local-level forest management.

The millennium development goals (MDGs) are mentioned only in three cases. In Mozambique [21], they have been featured as driving forces in national policies but have had few practical impacts. In Nepal [16], CF has been seen to play a key role in achieving MDGs. In Ethiopia [18], MDGs have been used to promote policies and programmes toward forest landscape restoration.

4.4.4 Market-related interventions

Certification
In Indonesia [14,15], the FSC is the only voluntary certification scheme with international traction: it covers 91% of the certified natural production forests. Despite unfavourable conditions such as unclear land tenure and inconsistent forest regulations, it seems that certification has contributed to improved forest management practices in Indonesia [14,15] by promoting transparency and by including a wide group of stakeholders in forest management decision-making. The contribution of certification to improving forest management is claimed to be more substantial than the impacts of governmental policies. The forest management requirements for certification are more demanding than those set by government regulation. However, certification is not an instrument for addressing unclear tenure issues and inconsistent policies. Many issues, including high costs, still impede progress in certification and SFM in Indonesia.

Certification is also reported to have advanced SFM in Guatemala [6], Spain [25], and BIH [23] and improved forest plantation management in South

Africa [27]. In BIH, more than 50% of the state forests are FSC certified. The case study from Spain reports that certification under the Programme for the Endorsement of Forest Certification (PEFC) has improved forest management but has not affected timber prices.

Legality verification

The EU FLEGT Action Plan aims at eliminating illegal timber from the markets. Voluntary Partnership Agreements (VPAs) between wood-producing countries and the European Union and EU Timber Regulation are key elements of this strategy. A VPA is an agreement between a timber-exporting country and the European Union. It aims to confirm that the exported wood is from legal sources and produced according to the exporting country's legislation. The intention of the EU Timber Regulation and the US Lacey Act is to ensure that no illegal timber or timber products can be sold in the European Union or United States, respectively.

Among the case study countries, only Indonesia [14] has signed a VPA. In Indonesia the national legality verification and certification systems (SVLK and PHPL)[5] were motivated by FLEGT and VPA, even though they were enacted before Indonesia signed the VPA. The authors of the chapter [14] argue that the development of Indonesia's national timber legality assurance system (SVLK) and the signing of the VPA have potential to reduce illegal logging in Indonesia. The improved access to EU and US markets as well other global markets, while also supporting environmental goals, has gained wide support from various actors.

For their part, Cambodia [11] and Thailand [17] are in the pre-negotiation phase for VPAs. In Cambodia, economic land concessions have significant implications for Cambodia's ability to meet international commitments and obligations, such as dealing with illegal logging. FLEGT efforts could thus further encourage the government to address the issues related to land concessions.

4.4.5 Direct influence

Acre's [1] forest-based development programme and more broadly, the expansion of community-based SFM in Brazil [3] have been directly influenced by international actors – the rubber tapper social movement and several communities received support from international environmentalists. International NGOs and researchers also have been influential in the development of forest-based policies and behaviours in Acre, working together in supporting community-oriented policies and technical extension work with rural communities. The World Wildlife Fund regional office is in Acre; and it has provided strong support to certification efforts there.

The Canadian Forest Service (CFS) created the Model Forest concept as an enabling tool for interested parties to become more involved in the management of natural resources and in contributing to innovations supporting SFM. The national Model Forest programmes, as for example, in Argentina [2] often receive support from the CFS and the Canadian Model Forest Network (CMFN) in order to develop and implement the model forest concept.

4.4.6 Pathways interact

The different pathways of influence previously discussed often interact. In Indonesia [14], for example, all four pathways were important for creating support for timber legality verification in the domestic policy process. In China [12], both international norms and markets pathways have influenced developments at the national level through certification and sustainability reporting standards. In Urbión, Spain [25], the main pathways of influence have been international norms and discourses (biodiversity-enhancing measures) and markets through certification.

In US PNW [10], and based on earlier analyses also in Canada, the markets pathway has been considered very influential in the process that led to an agreement on the use and protection of large forest areas. However, the analysis in this volume of the pathways of influence in Canada [9] finds that the direct access to domestic policy-making offers a much better explanation and that market campaigns only had significant effect in combination with the direct access pathway.

While International processes can influence policy-making at the national level, the outcomes of international discourse and processes are often influenced by conflicts, discussions, and policy development that spreads from the national to international sphere. In other words, the influence is a two-way street. For example, the forest biodiversity/conservation biology/ecosystem management discourse that became influential in the US PNW [10] from the 1980s onwards was extremely influential at the global level as well.

[5] Indonesia's Timber Legality Verification System (SVLK) and Sustainable Production Forest Management Standard (Pengelolaan Hutan Produksi Lestari, PHPL).

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