Chapter 20
Governance in the Boreal Forest: What Role for Local and Indigenous Communities?

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Abstract This chapter describes key trends in boreal forest governance in the twenty-first century and implications for the engagement of local and Indigenous communities. By focusing on three global trends—internationalization, marketization, and decentralization—we highlight the evolving role of local and Indigenous communities in increasingly hybrid and multiscale governance arrangements. We present two case studies, community forests in Canada and Sami–industry collaborative planning in Sweden, to analyze the qualities of local governance initiatives and how they seek to transform conventional approaches to economic development and land-use practices according to the values and priorities of local and Indigenous communities.

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20.1 Introduction

The boreal forest has taken center stage in environmental politics because of its status as one of the world's largest "intact" forest landscapes, its unique wildlife, and its role in the fight against climate change (Watson et al., 2018). While boreal forest conservation has become a key global priority, the boreal forest is also an inhabited landscape, which includes many culturally diverse communities with long-standing ties to the forest for cultural and subsistence purposes and other communities more actively engaged in the industrial development of natural resources (Nitoslawski et al., 2019). There are many Indigenous communities in the boreal forest whose identities, cultures, and livelihoods are closely connected to the land.

Conciliating environmental conservation and socioeconomic well-being in the boreal forest is a major challenge, especially in the context of global climate change (Gauthier et al., 2015). It requires coordinated efforts among a diversity of actors working at multiple scales. The term *environmental governance* is often invoked to describe the myriad processes through which decisions regarding the management and stewardship of the boreal forest are taken. According to Larson and Petkova (2011), "Governance refers to who makes decisions and how decisions are made, from national to local scale, including formal and informal institutions and rules, power relations and practices of decision-making" (p. 87).

This chapter looks at the evolution of boreal forest governance, with a specific focus on the role and influence of local and Indigenous communities. While the conflicts between environmentalists and industrialists over boreal forest protection are widely publicized, it is more difficult to characterize engagement on the part of local communities (Jensen, 2000; Patriquin et al., 2007; Willow, 2012). This may be related to the cultural diversity of communities, which includes Indigenous and non-Indigenous peoples. It may also be a consequence of variable histories of engagement in resource development and the presence of diverse and sometimes divergent sets of social values. However, what is clear is that since the introduction of the sustainability paradigm in the late 1980s, the notion that local people should be included in decision-making processes has been increasingly regarded as a priority. Local participation is lauded for several reasons: its purported ability to enhance accountability by bringing decisions closer to affected people; the improved integration of time- and place-specific knowledge—thereby enhancing environmental benefits; and its reduction of potential conflict by enhancing local buy-in (Lemos & Agrawal, 2006). Thus, across the board, new governance approaches, both corporate-driven, e.g., forestry certification, and government-driven, e.g., policies, regulations, emphasize advancing community participation.

The turn toward community participation in the forest sector has become the subject of a wide-ranging academic literature, which adopts a variety of lenses. The literature describes a range of governance approaches, from the more unidirectional processes associated with the public review of plans to the more institutionalized power-sharing arrangements, such as co-management boards and community forests

(Kittredge, 2003; Teitelbaum, 2016). However, despite important structural differences in objectives and design, research reflects the common observation that many arrangements do not meet local communities' expectations (Fuss et al., 2019). The notion of power sharing or devolution of authority is key to successful governance in many instances (Berkes, 2010). Indeed, given the long history of industrialized resource development in many boreal regions, it raises the question, central to this chapter, *To what extent has boreal forest governance evolved to include community-based approaches, and what do these look like?* Our analysis is based on an examination of the recent research literature in two major boreal forest countries (Canada and Sweden), including more than 95 articles, book chapters, and reports produced by academics and policymakers.

This chapter begins with a description of some of the historical experiences of local and Indigenous communities in each country. We then set the broader context for participatory governance in the boreal forest through a description of some key trends in forest governance since the 1980s and the implications for the participation of local and Indigenous communities. We finally describe local governance initiatives in each jurisdiction and focus on how they are seeking to transform local economies and predominant forms of land use, despite what are considerable obstacles.

20.2 A Portrait of Forest-Dependent Communities in the Boreal Regions of Canada and Sweden

In Canada, the vast majority (94%) of forests are under public ownership (Natural Resources Canada, 2020). Most fall under the jurisdiction of provincial governments and are allocated to forestry companies under long-term licenses. Historically, many industry-based communities prospered under the patronage of forestry companies, supported by governmental investment in wood processing and manufacturing under an *even-flow* policy regime. However, since the 1980s, the forestry industry has undergone significant structural changes because of the growing influence of global market forces and the introduction of neoliberal policies. While this has led to mill closures and consolidations, it has also resulted in a less *hands-on* approach on the part of forestry companies. This has revealed some of the underlying weaknesses within forest-dependent communities, including insufficient economic diversification, a lack of skilled labor, and limited community capacity (Patriquin et al., 2007). Communities are also increasingly facing risks associated with climate change, e.g., increased incidence of forest fire and insect outbreaks and changes in species composition, creating problems related to wood supply (Davidson et al., 2003; Podur et al., 2002).

Indigenous communities in the boreal region have much longer relationships to forest lands and a different relationship to the forest sector. The traditional territories of Indigenous boreal peoples in Canada cover vast forest areas and continue to support livelihoods and cultures (Saint-Arnaud et al., 2009; Smith, 2015). In most boreal

forest regions in Canada, Indigenous communities are covered by historical treaties, which set out certain limited hunting, fishing, trapping, and gathering rights (RCAP, 1996). However, Indigenous people face legal barriers to having their treaty rights respected, as the courts tend to lean on the side of extractive industries (McCrossan, 2018). Other nations have entered into modern-day agreements, such as the Innu in Labrador, the Cree and Naskapi in Québec, the Tłı̨chǫ in the Northwest Territories, and several First Nations in the Yukon Territory (see Samson, 2016). Finally, some Indigenous peoples—mostly in Québec and British Columbia—have yet to sign any form of land-claim agreement with the government.

Historically, Indigenous communities were excluded from the benefits of resource development and suffered many negative impacts from resource development (Teitelbaum, 2015). This continues to be the case, as evidenced by the ongoing campaigns of Indigenous groups, including in the courts, to block resource development or to have their grievances addressed. Many Indigenous communities face high unemployment and see little direct economic benefit from resource development (Proulx et al., 2020). However, in recent decades, Indigenous peoples have strengthened their political actions in pursuit of the recognition of Indigenous rights, the settlement of outstanding land claims, and the redistribution of resources (Lawler & Bullock, 2017; Pinkerton, 2019; Wyatt et al., 2019). More recently, Indigenous participation in the forest sector has increased in some provinces, in part through the allocation of forest tenures. Indigenous-held forest tenures increased from 7 to 19 million $m^3 \cdot yr^{-1}$ between 2002 and 2017, i.e., from 4 to 10.5% of the Canadian total of forest tenures (NAFA, 2003, 2018). Some Indigenous communities are developing alternative avenues to forestry development, for example through offering tourism and recreation activities or the development of nontimber forest products. Indeed, there are increasing calls for community-centered approaches to land use, stewardship, and local development to foster reconciliation and more sustainable patterns of land use (Baldwin, 2003; Patriquin et al., 2007).

In Sweden, ownership patterns and the history of forestry development differ markedly from that of the Canadian context. Roughly 50% of Swedish boreal forests are owned by small and family enterprises, whereas the other half is split more or less equally between large companies and the state (Skogsstyrelsen, 2015; Stjernström et al., 2017). Small-scale forest farms are thus an important economic model, which often combines forestry with farming activities. Since the early twentieth century, forest owners have collectivized their activities by creating forest cooperatives or associations that use management techniques akin to those of large forestry companies. There are three forest-owner associations in Sweden, which collectively represent approximately 112,000 members who own and manage 6.2 million ha (Lantbrukarnas Riksförbund, 2014). The goal of the owner associations is to ensure better market access, offer forest management services, and play an advocacy role in defending the rights of forest owners. Some have also invested in mills and installations for the energy sector (Skogsstyrelsen, 2015). Forest cooperatives are represented by the National Federation of Family Forest Owners, which has a national and international presence with the European Union. Indeed, forests in Sweden are greatly valued for the recreational opportunities they provide to all citizens (known

as *allemansrätten*, or right of public access; Stjernström et al., 2017). In Sweden, usufructuary rights to the forest are granted to all citizens. This allows them to access land (whether public or private) to pick berries, gather mushrooms, camp, or pursue outdoor activities. Hunting is also very popular, especially moose hunting. This ethic of public access is highly developed in Sweden and has been likened to a type of collective responsibility. "The idea of everyman's right forms the basis for a culture of stewardship. It defines a framework for community access to public forest lands, and indeed to the landscape as a whole" (Bullock & Hanna, 2012, p. 149). Reindeer husbandry is under the exclusive, constitutionally protected rights of the Sami Indigenous people (Moen & Keskitalo, 2010). Reindeer-herding areas cover approximately 55% of the Swedish land base, i.e., 23 million ha (Skogsstyrelsen, 2015). The territory used by reindeer herders is divided into 51 reindeer-herding communities, many of which overlap with commercial forestry lands. Reindeer husbandry relies on large grazing grounds, as only natural low productive vegetation is used for forage. Forestry operations can affect reindeer husbandry through forest fragmentation, forest age structure changes, and increased infrastructure, such as roads (Berg et al., 2008; Kivinen et al., 2012). Thus, the Swedish Forest Agency (*Skogsstyrelsen*) and certification systems have helped implement a consultation regime between Sami and forestry companies.

Although both Canada and Sweden have seen an increase in consultative requirements, Indigenous peoples and local communities continue to express ongoing concerns in regard to their real level of influence in forest-related decisions (Reed, 2010; Sandström & Widmark, 2007) and in relation to ecological degradation from resource development and the lack of tangible benefits from this resource exploitation. Many communities are seeking avenues to assert greater influence over forestry governance processes and build economic development strategies that are in line with community aspirations.

20.3 Global Governance Trends: Internationalization, Marketization, Decentralization/Devolution

Since the 1980s, the overarching political and economic context for forestry governance in the boreal forest has shifted considerably. This has created new opportunities for community participation and institutional innovation, but it has also created new challenges related to what is an increasingly globally competitive and technologically intensive environment. There is also increasing pressure for governance initiatives to demonstrate their adherence to sustainable development objectives, including biodiversity conservation, climate change mitigation, and social justice. This procedural shift toward a sustainability paradigm is reflected at different scales, from the local to the global, and has had impacts on the forms of governance being promoted and experimented with by government, industry, and civil society actors.

In the following section, we describe three trends in forest governance in the twenty-first century: (1) *internationalization*, (2) *marketization*, and (3) *decentralization* (Fuss et al., 2019; Lemos & Agrawal, 2006); we also reflect on how these trends are influencing opportunities for local and Indigenous communities.

20.3.1   *Internationalization*

The conservation and protection of forests have been part of the global environmental agenda since the 1980s. However, building a consensus around an international forest policy agenda has proved challenging. So far, efforts to convene a legally binding international agreement for forests have been unsuccessful. Indeed, international forest policy has been described as a "fragmented regime with a conflictive rather than cooperative architecture" (Howlett et al., 2010, p. 93).

Instead, international forest policy reflects a multipronged strategy that combines a number of instruments, including sectoral agreements, multilateral policies, and programs, many based on voluntary or soft policy approaches. These have been classified in multiple ways. For example, according to Humphreys in McDermott et al. (2010), the international forest regime covers:

- a growing body of soft international law focused on forests such as Chapter 11 of Agenda 21 and the United Nations Strategic Plan for Forests adopted in 2017 (see Sotirov et al., 2020 for further examples)
- hard international legal instruments with a forest-related mandate (e.g., the Convention on Biological Diversity; United Nations Framework Convention on Climate Change)
- voluntary private sector regulation, such as the Forest Stewardship Council principles for forest management

All these international instruments encompass commitments aimed at protecting the rights of local and Indigenous communities. Broad goals, such as the preservation of traditional knowledge, the promotion of equitable sharing of benefits, poverty eradication, and support for forest-based development and the rights to enhanced participation in forest governance—including the right to free, prior, and informed consent—are part of many international policy initiatives (Arts & Babili, 2013). One example is the Convention on Biological Diversity, signed in 1992 at the Earth Summit in Rio de Janeiro (United Nations, 1992). There are a number of social goals inscribed within the agreement, including Article 8j, which seeks to preserve and maintain traditional knowledge for the conservation and sustainable use of biodiversity, and Article 10c, which seeks to promote traditional cultural practices that meet conservation or sustainable use requirements. International agreements on climate change have also paid increasing attention to the role of forests and forest-dependent communities in the fight against climate change (Rayner et al., 2010).

However, international forest policy has been criticized for focusing predominantly on tropical forests and underrepresenting the importance of boreal forests both

from a climate change and biodiversity perspective (Moen et al., 2014; Warkentin & Bradshaw, 2012). According to Moen et al. (2014), the escalating impacts of climate change in boreal forests, e.g., increased severity and frequency of forest fires, insect outbreaks, combined with accelerated harvesting justifies rapid international policy action to offset ecological risks and capitalize on existing management approaches and institutions in boreal countries. Warketin and Bradshaw (2012) argue that this requires more extensive forest reserve systems to foster carbon sequestration, the incorporation of climate and predictions about shifts in ecosystem dynamics into management, and a stronger focus on reforestation, especially in Russia where deforestation and fragmentation are most pronounced. International policy and instruments are recognized as a potentially important source of financing to support action on climate change and the preservation of biodiversity (Hoogeveen & Verkooijen, 2010). Climate commitments should also create new business opportunities for local communities, for example through the development of wood as a source of renewable bioenergy (Fuss et al., 2019).

There is also a growing network of nongovernmental organizations collaborating on issues related to boreal forest conservation and operating across national boundaries, such as the Nature Conservancy, the World Wildlife Fund, and Greenpeace. A notable example was the establishment of the Canadian Boreal Forest Agreement (CBFA), described as "the world's largest conservation agreement which incorporates both environmental and economic values" (CPAWS-Saskatchewan, 2021). Funded, in part, by foundations from the United States, this was a voluntary agreement involving forestry companies and environmental NGOs aimed at protecting habitat for woodland caribou through restrictions on forest harvesting in sensitive habitats in exchange for the suspension of environmental NGO campaigns against industry. However, the CBFA suffered from a loss of credibility related, in part, to the exclusion of Indigenous peoples from negotiations, and this agreement was ultimately unsuccessful (Fuss et al., 2019). There have also been international efforts to build research capacity and to help actors measure and track progress toward implementing sustainable forest management (Linser et al., 2018). Organizations such as the United Nations Intergovernmental Forum on Forests (IFF) and the Food and Agriculture Organization (FAO) have supported processes to develop criteria and indicators of sustainable forest management at regional levels, including their integration into Agenda 21 (McDermott et al., 2010).

20.3.2 Marketization

Another dominant strategy in the pursuit of sustainable forest management in the boreal forest is the use of market-based approaches. Rather than being founded in traditional legal or regulatory approaches, these are driven by the private sector and civil society actors and focus on enhancing corporate responsibility. Most are based on voluntary corporate action via a commitment to a sustainability-centered norm or policy through an incentive-based system. Market-based approaches are

described as part of the neoliberal turn within environmental governance because they minimize/displace the role of government as the central source of decision-making authority (Krott et al., 2014). They are often promoted as "win–win" opportunities that marry economic efficiency—market-based approaches are described as innovative and cost-effective—and environmental protection. There is increasing evidence of government involvement and support of market-based approaches, leading some to describe regulatory regimes as *hybrid* or *intersecting* (Bostrom, 2003; Schneiberg & Bartley, 2008). Examples include corporate codes of conduct and forest certification. Market-based approaches have spurred important debates within civil society and academic circles regarding the degree to which they facilitate systemic change in practices (Klooster, 2010; McCarthy, 2006).

In boreal regions, including Canada, Sweden, and Russia, the leading example of market-based instruments are forestry certification standards (Chap. 21), which have made huge gains in recent decades. Forestry certification is based on corporate conformance to a forest management standard, covering social, environmental, and economic aspects. Performance is most often verified by third-party auditors, and the successful adherence to the standard is rewarded through the opportunity to use the logo, which in theory confers a certain market advantage (Rametsteiner & Simula, 2003). Several certification systems compete for space internationally, including Programme for the Endorsement of Forest Certification (PEFC) standards and the Forest Stewardship Council (FSC). The FSC standard was created in 1994 by environmental and civil society groups along with industry partners in response to the failure of governments to develop a binding international forest agreement. PEFC, an industry-based system, was created a few years later; it is based on the endorsement of existing certification standards that comply with PEFC's international and regional criteria.

Both FSC and PEFC include commitments to local and Indigenous communities. FSC, widely considered the most stringent in this area, integrates the principle of free, prior, and informed consent (FPIC) into its international and national standards (Mahanty & McDermott, 2013; Teitelbaum et al., 2021), whereas PEFC recognizes Indigenous rights through written policies, communications, and the protection of cultural sites. However, Indigenous people have expressed discontent with certification, questioning its ability to adequately protect their rights and denouncing power asymmetries in favor of industrial stakeholders (Johansson, 2014; Tikina et al., 2010). Furthermore, although certification systems require forestry companies to engage in public participation and include measures for the protection of local forest-based activities, Indigenous people have raised concerns over the insufficient evaluation of their use of land and resources (Teitelbaum & Wyatt, 2013), leading to inadequate protection and rehabilitation of biocultural landscapes (Meadows et al., 2019). From a governance perspective, certification has helped reconfigure relationships and adds a new level of oversight and transparency to forest management (Johansson, 2014; Sandström & Widmark, 2007; Tikina et al., 2010). For example, the FSC's Permanent Indigenous Peoples Committee allows Indigenous people to be involved in standard development and review (Meadows et al., 2019).

20.3.3   Decentralization

Decentralization can be defined as the transfer of powers from the central government to lower-level actors and institutions (Agrawal & Ribot, 1999). Others use the terms *devolution* or *community-based management* to refer to initiatives that provide enhanced decision-making authority to local communities (Ambus & Hoberg, 2011). What unites these different approaches is the dispersion of points of decision-making to new actors and institutions, usually toward the local or regional level (Bissonnette et al., 2020). Since the 1990s, decentralization of natural resource governance has become a popular approach with international organizations, aid agencies, and state-based agencies, especially in the global South (World Bank, 1999). Disappointed with the shortcomings of centralized and top-down resource governance, decentralization was seen as an avenue with the potential to enhance participation and equity in resource management (Larson & Petkova, 2011). Whether through local government agencies or community-based institutions, these organizations were seen as being closer to affected populations and thus better able to include their views, reflect their concerns, and capitalize on local knowledge and priorities when designing appropriate development strategies. However, decentralization is often administrative (from central governments to local branches of central governments) rather than political (from central governments to local communities; Ribot et al., 2006). This has created difficulties for local governments and community organizations who often find themselves charged with operational responsibilities, whereas the more strategic aspects remain in the hands of central governments. Some researchers observe that the rise of decentralization is synonymous with a neoliberal shift within policymaking, which has resulted in the imposition of administrative responsibilities on lower institutional levels without the corresponding authority, political power, or financial resources to manage forests effectively (McCarthy, 2006).

Both in Sweden and Canada, comparisons of various management scenarios and forest simulation studies have shown that taking into account the needs and views of Indigenous people only marginally reduces profits from logging, while increasing social acceptability and maintaining cultural and biological diversity (Asselin et al., 2015; Dhital et al., 2013; Horstkotte et al., 2016; Korosuo et al., 2014). With that in mind, decentralization could theoretically allow for greater autonomy and self-government for Indigenous communities. In Québec, different types of delegation agreements are defined in the forest management regime, many of which have been used by band councils, including those of the Atikamekw (Fortier & Wyatt, 2019) and the Mi'kmaq (Blouin et al., 2020). The Cree Nation of Québec, working with provincial authorities, has been crafting culturally sensitive forestry arrangements on its ancestral lands, which are under a modern treaty (Jacqmain et al., 2012). In northern Saskatchewan, forestry co-management has been in place through Mistik Management, which is based on a participatory approach led by industry. However, in most cases, forest-related arrangements between Indigenous communities and provincial authorities remain small-scale and with a limited scope in terms of land control and governance (Blouin et al., 2020). Moreover, administrative procedures

required to set up and pursue even limited agreements involve costs that are often prohibitive (Lawler & Bullock, 2019). In addition, there are concerns that upon signing delegation agreements, Indigenous peoples in Canada are forced to accept institutional parameters of the state "whose strategy consists essentially in consolidating its colonial (and racist) sway over Indigenous peoples" (Salée & Lévesque, 2010, p. 101). Nevertheless, it can also be argued that Indigenous peoples have the capacity "to advance their cause and navigate efficiently and creatively past the state's roadblocks on the path to political autonomy" (Salée & Lévesque, 2010, p. 101).

20.4 Further Examination of Decentralization in Boreal Regions

20.4.1 Case Study of Community Forests in Canada

Community forestry is a broadly accepted if somewhat mythologized term in Canada. Both rural and Indigenous communities across Canada have manifested their discontent with the industrial–corporate model of forestry stemming from the perception that insufficient benefits are being retained in local communities and because of concerns that forestry is causing long-term damage to ecosystems, including water quality (Teitelbaum, 2016). Thus, community forestry is synonymous with an alternative form of development, which is seen to increase local decision-making over forest resource use and management by developing forestry practices that reflect community objectives and values while improving cultural, ecological, and economic sustainability (Bullock & Hanna, 2017; McIlveen & Rhodes, 2016). A variety of practices and institutional arrangements fall under the umbrella term of community forestry (Teitelbaum et al., 2006). However, most arrangements take place between local communities, usually represented by an organization, i.e., municipality, NGO, Indigenous band council, provincial public land management authorities, and, in some cases, private forestry companies. As a result, community forest initiatives mainly rest on complex arrangements that often require the devolution of power by provincial authorities to local organizations (Fuss et al., 2019).

Progress toward implementing community forestry in Canada has mainly occurred in provinces that have made legal reforms in that direction, often in response to conflicts surrounding forest use and community dissatisfaction with the extent of participation in decision-making (Bullock & Hanna, 2012; Lawler & Bullock, 2017). In the case of Indigenous-run forests, some arrangements have come about as the result of political negotiations regarding land rights. One well-known initiative in Canada is the *British Columbia Community Forest Agreement*. Initially started as a pilot program in 1998, it was eventually made an official tenure, allowing the provincial government to grant community forest tenures to organizations such as local governments, Indigenous communities, and community groups through 25-year renewable leases. There are now more than 50 community forests of this type in

British Columbia (Government of British Columbia, 2020a) of which approximately one-quarter are held by Indigenous communities. Many of these initiatives have achieved their goals, such as increasing local benefits from forestry and providing jobs in small timber-dependent communities. The Burns Lake Community Forest, located in the north-central interior of British Columbia, is often cited as an exemplary case of a successful community-based forestry operator (McIlveen & Bradshaw, 2009). However, pressure on the forest sector exerted by the mountain pine beetle epidemic and forest fires has endangered the economic stability of the Burns Lake Community Forest, revealing some of the vulnerabilities of operating on a smaller scale in a context dominated by large and highly industrialized firms (McIlveen & Rhodes, 2016). Indeed, despite its success, the design of the BC community tenure has been criticized, as it is seen as replicating pre-existing provincial industrial land-based forest tenures, which provide limited flexibility and authority to tenure holders (Ambus & Hoberg, 2011). British Columbia has also created a tenure for Indigenous communities—the *First Nations Woodland Licences*—of which there are 19, covering an area of 3,795,000 ha (Government of British Columbia, 2020b). Nevertheless, the extent of governmental devolution is also criticized here. As with the Burns Lake Community Forest, "the emphasis remains on timber production with all final decisions regarding forest management continuing to be held by the Ministry of Forests and Range" (Trosper & Tindall, 2013, p. 313).

Ontario and Québec have also made reforms in the direction of community forestry. The 2009 Ontario Forest Tenure Modernization Act, although yielding mixed results, exemplifies some of the measures deployed by provincial governments to reform forest tenure and grant more power to resource-dependent communities (Palmer et al., 2016). For example, the province created Local Forest Management Corporations (LFMCs), Crown agencies responsible for vast forest territories, which include community and Indigenous representatives on the board of directors. It is difficult to compare these LFMCs with community forests elsewhere in Canada, as they remain very much in line with the large-scale and industrialized approach to forest management.

In Québec, the 2010 Forest Regime includes a provision on community forests through the concept of *Local Forest* (usually referred to as *forêt de proximité*), which involves the extensive delegation of responsibilities. Although this possibility has elicited much enthusiasm among forest stakeholders, its large-scale implementation has been delayed numerous times (Bissonnette et al., 2020). Nevertheless, in Ontario, as in Québec, community forest initiatives have been implemented on public lands, often through community-based or municipal management corporations that established mutually beneficial partnerships with logging companies, outside formal arrangements provided by existing legal frameworks, i.e., Maria-Chapdelaine in Saguenay-Lac-Saint-Jean, Québec, and the Enhanced Sustainable Forest License, in northern Ontario (Fournier, 2013; Lachance, 2017). One of the greatest barriers to the development of community forestry in the boreal forest is the organization of the forestry sector around large-scale industrial logging, which has constrained the capacity for innovation in tenure. In southern Québec and Ontario, municipal forests exhibit innovative forms of community-based governance processes that depend on

local citizen participation (Bissonnette et al., 2020). A primary concern of municipal, Indigenous, and conservation authorities in Ontario and Québec, for example, is the protection and enhancement of ecosystem services (Teitelbaum & Bullock, 2012; Uprety et al., 2017). In these cases, clear tenure rights and the absence of pre-existing area-based agreements with logging companies provide local stakeholders with more power to implement community forest practices and allow communities to set up alternatives to the productivist forest regime present in Canada since the beginning of the industrial era (Blais & Boucher, 2013).

20.4.2   Case Study of Collaborative Planning Between the Forest Industry and the Sami in Sweden

The Sami Indigenous people have a usufructuary right to practice reindeer husbandry, which takes place in about 75% of the forest area in northern Sweden, including both public and private lands (Johansson, 2014). However, frequent conflicts arise with forest companies, making it difficult for the Sami to assert their rights, despite compulsory consultation procedures having been introduced by the Swedish government in the 1970s in year-round grazing areas (Widmark, 2006) and recently extended to all grazing areas by the FSC certification standard (FSC Sweden, 2010). On the one hand, timber harvesting removes not only trees but also lichen, the reindeer's preferred winter food. On the other hand, preserving older, lichen-rich forests exclusively for reindeer grazing leads to lost timber revenues (Bostedt et al., 2003). Joint management could simultaneously benefit the forest industry and the Sami reindeer herders by using selective cuts instead of clear-cuts (Berg et al., 2008; Korosuo et al., 2014); however, there are currently no joint management initiatives in Sweden, except for a few experiments (e.g., Stjernström et al., 2020). Moreover, selective cuts are not allowed by the Swedish Forestry Act (*Skogsvårdslagen*) because they allegedly do not allow for meeting forest regeneration objectives. In one joint management experiment, Sandström et al. (2006) used a collaborative learning technique to bring together five forestry representatives and five Sami representatives to evaluate seven scenarios describing alternative future relationships. They identified six overarching needs that should be addressed to improve relationships: (1) agree on a common definition of what consultation is; (2) adopt a long-term perspective; (3) consult earlier in the planning process; (4) improve consultation tools, e.g., maps, by using both scientific and Indigenous knowledge; (5) value different activities on the land; and (6) elaborate a conflict resolution strategy. The importance of adopting co-management is increasingly evident, as climate change affects both the forest industry and reindeer husbandry, both of which would benefit from working together toward the adaptation of the entire socioecological system (Moen & Keskitalo, 2010; Pape & Löffler, 2012).

In 2017, the Swedish government proposed a bill on the obligation to consult Sami people (Larsen & Raitio, 2019). The proposal was severely criticized on both industrial and Sami fronts. First, the industry feared the bill would increase uncertainty over resource access and threaten economic interests. Second, the Sami parliament denounced the first draft of the bill, arguing that it did not allow meaningful influence on decision-making and failed to comply with international standards for protecting Indigenous cultures and rights. When this chapter was written, the bill had yet to be adopted. Meanwhile, the FSC National Forest Stewardship Standard of Sweden was revised in 2020 and now requires large forest owners to engage in a participatory planning process with reindeer-herding communities, which "can choose to give consent to the proposed management activity, together with the considerations and any adaptations that are agreed upon in the participatory planning process, or choose not to give consent to the activity" (FSC, 2020, p. 25). However, the new standard goes on to specify that, in case of dispute, if the parties cannot reach an agreement despite all the conflict resolution and mediation measures in place, "it is up to [the company] to either: (a) raise the management activity for participatory planning again once the forest grazing conditions have changed; or (b) carry out the activity without the consent of the [reindeer-herding community]" if the company can show that the Sami demands would substantially affect long-term forest management or that the Sami did not provide a sufficiently clear account of how the activity would disturb reindeer herding (FSC, 2020, p. 26). Hence, while timid advances are being made toward increased Sami participation in decision-making, the search continues for an effective collaborative planning process. To this end, a pilot project of innovative land-use planning was undertaken in the municipality of Vilhelmina (Bjärstig et al., 2019). The project revealed the importance of (1) personally contacting participants and making sure all interest groups are represented; (2) jointly establishing a timeline; (3) agreeing on responsibilities; (4) setting clear objectives; (5) building capacity and involving the locals in drafting the plan (rather than merely being consulted on it); (6) providing participatory mapping tools; (7) relying on a neutral external moderator to facilitate the meetings; and (8) providing multiple occasions for participants to react on and validate the plan, both individually and during group meetings.

20.5 Conclusions

In this chapter, we explored the role played by local and Indigenous communities in boreal forest governance, focusing on the Canadian and Swedish contexts. The impending transformation of the boreal forest because of global environmental change will require making difficult management decisions to ensure boreal forests continue to play their key ecological functions, e.g., contribution to biodiversity and carbon sequestration. It is increasingly recognized that local and Indigenous communities must be involved in forest governance, in a bottom-up manner, for management decisions to be in phase with the local context and garner social acceptability. Moreover, it is now widely recognized that local and Indigenous ecological

knowledge can significantly contribute to improving forest ecosystem management and reduce the impacts associated with large-scale industrial logging (Angelstam et al., 2011; Asselin, 2015). We emphasized three key trends that influence the level of involvement of local and Indigenous communities in boreal forest governance: internationalization, marketization, and decentralization. These trends reveal the growing importance of nonstate actors in boreal forest governance and hence the complex interactions among environmental NGOs, public authorities, Indigenous communities, and forest industries. This analysis revealed that governance in boreal forests is fragmented and is characterized by a diverse set of national and global policy instruments, including voluntary approaches. The limited reach of international regulation frameworks in boreal forest management, i.e., the Convention on Biological Diversity's Aichi Targets, highlights the need for public participation to elaborate management guidelines to ensure the resilience of the socioecological system. The role of national governmental authorities in boreal forest management, whether planning forestry activities or devolving this responsibility to industry, has raised concerns over the possibility of ensuring adequate participation of local and Indigenous communities. The alleged insufficiency of national regulatory frameworks and a lack of international hard law on boreal forest governance have partly been filled in Canada and Sweden by market-driven initiatives such as certification standards. Although coupled with the pursuit of forest exploitation, the most stringent standards, e.g., FSC, can, in some cases, be more rigorous and demanding than national forest laws, allowing for greater protection of biological and cultural diversity. Indigenous peoples have found through certification a forum to not only express their views and needs but to directly influence policymaking. However, there remains an important gap between the aspirations of Indigenous peoples with regard to land stewardship and the progressive changes brought about through certification (Johansson, 2014; Teitelbaum & Wyatt, 2013). More importantly, certification standards purportedly deepen market-based relations and reinforce a neoliberal logic that is considered contrary to values defended by many local and Indigenous communities (Klooster, 2010).

A growing community of researchers and advocacy groups is calling for the implementation of community forest initiatives that support local and Indigenous visions, recognize the value of community involvement in forest management, and support the diversification of forest uses to enhance social and ecological resilience. However, decentralization still too often equates with the mere transfer of power from the central government to its regional constituents instead of a real devolution to local and Indigenous communities (Ribot et al., 2006). The large-scale industrial forest exploitation model is embedded in production-based boreal forest tenure systems, which drastically constrains local communities' involvement and the diversification of forestry practices. As we have demonstrated, the case studies examined here face a number of challenges related to the scope of decision-making authority, regulatory flexibility, and economies of scale. However, these initiatives nonetheless represent clear examples of institutional innovations, which are forging a new path in regard to the conciliation of timber-related objectives with other community priorities related to the integration of sociocultural values and the protection of ecosystems.

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