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## Governing Large Carnivores—Comparative Insights from Three Different Countries

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### ABSTRACT

The governance of large carnivores is often surrounded by conflicts. Along with the difficulties of governing large carnivores through centralized, top-down governing and a general shift towards participatory approaches in natural resource governance, this has led many countries to establish various collaborative measures in large carnivore governance – often presented as a catch-all solution to problems of legitimacy, democratic deficit and effectiveness. However, the field of large carnivore governance currently lacks a coherent understanding of strengths and weaknesses of different kinds of collaborative arrangements. In this paper, we address this knowledge gap. Using the framework of modes of governance to categorize and compare the governance of large carnivores in Norway, Sweden and Finland, we discuss the potential and limitations of various governance modes and identify gaps in contemporary research literature. The main conclusion is that all three governance systems need to incorporate more interactive governance elements.

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### KEYWORDS

Collaboration; comparative research; governance; large carnivores; participation

## Introduction

Large carnivores represent a highly contested natural resource. Their management is loaded with emotions, conflicting values and norms, issues of social and political trust, and clashing knowledge regarding how best to manage the species (Knight 2003; Clark, Rutherford, and Mattson 2014; Sjölander-Lindqvist, Johansson, and Sandström 2015). Under such circumstances, governance and management may become difficult. As traditional, mechanistic, and technocratic governance modes tend to neglect complexity and the human dimension (Holling and Meffe 1996; Pahl-Wostl et al. 2007), resource regimes are increasingly designed with the aim to allow for more flexible governance and management (Bodin 2017). Recent decades have seen increasing agreement within both scientific and policy communities on the need for collaborative governance of natural resources. Most countries have also ratified central conventions, such as the Convention on Biodiversity, the Aarhus Convention, Agenda 21, and in Europe; the Habitats directive, which all prescribe such a development (Council of Europe 1979; UNEP 1992; UNCED

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1992; UNECE 1998; European Commission 1992). Hence, it is reasonable to anticipate that countries actually attempt to implement these measures (Sabatier et al. 2005; Newig and Fritsch 2009; Emerson, Nabatchi, and Balogh 2012; Lange et al. 2013).

However, both centralized, top-down governing and decentralized forms of governance present great difficulties for the governance and management of large carnivores (Sandström et al. 2009; Linnell and Boitani 2012; Stöhr and Coimbra 2013). Collaborative measures are often presented as solutions to conflicts and problems of acceptance (Lundmark, Matti, and Sandström 2014; Pomeranz et al. 2014; Redpath et al. 2017). This “deliberative turn” (Bäckstrand et al. 2010) is underpinned by the normative assumption that broad participation by public and private actors in policymaking will increase the legitimacy (by stakeholders/actors perceiving that they have agency), democracy (by broad participation and deliberation), and effectiveness and sustainability (through goal achievement and by combining knowledge and sharing implementation responsibilities) of policy outcomes (Jentoft 2000; Dingwerth 2007; Berkes 2010; Sjölander-Lindqvist, Johansson, and Sandström 2015).

In this article, we assume this normative approach—that participation, deliberation, and decentralization are keys to successful governance—when we explore and compare three different systems of attempted collaboration in large carnivore governance. By focusing on actors, institutions, and policy content, we can create an in-depth understanding of how different countries try to implement the commitments in international conventions through different governance modes and try to fit these into existing structures. Furthermore, by investigating solutions (i.e., design of institutions), we can also understand their justifications and thereby the challenges that each case tries to deal with. Comparing three cases in a similar social and ecological context also allows us to discuss the challenges that accompany the implementation of modes.

This study covers policies and research targeting or analyzing the governance of wolf (*Canis lupus*), brown bear (*Ursus arctos*), lynx (*Lynx lynx*) and wolverine (*Gulo gulo*) in Norway, Sweden, and Finland. These countries have similar political, economic, and demographic systems and a common history regarding large carnivores, where hunting nearly lead to extinction. They all introduced new policies in the mid-20th century, where the new agenda was to protect and recover the carnivore species. However, despite their common history on hunting and governing, the countries have chosen to design the governance of large carnivores in different ways (Sandström et al. 2009; Borgström 2012; Kränge et al. 2017), which opens up for comparison. Focusing more clearly on different cases within the same ecological system and with similar basis for human–wildlife conflicts, but where political boundaries cut across the system, provides us with the opportunity to explore current knowledge and thinking on the role of governance during such circumstances.

Furthermore, there is a general lack of research on a global level on the implementation of the institutional features of, e.g., the international biodiversity conventions. Our three cases are no exception, since there are very few studies that take all the formal institutions of a whole governance system into account, and no comparative approaches. We argue that research conducted on one case (such as a single country’s policy or a body within a single governance system), or one specific element of collaborative governance (such as deliberative practices or policy formulation) is not satisfying when trying to understand what different systems can learn from each other. The purpose of this study is to facilitate

such learning by (1) assessing peer-reviewed literature since 2009, (2) making a descriptive analysis of current governance systems, and (3) putting the literature and the current governance system in dialogue with each other to facilitate a comparative analysis between the different cases. Together, these three methodological steps create a foundation for advancing knowledge, facilitating development in the disclosure of less recognized areas of focus, and identifying ways forward to further strengthen the application of governance in natural resource management.

This paper contributes to filling a gap in the knowledge of how formal governance systems are structured. By providing comparative insights to the existing literature on governance of large carnivores, we hope that our results can support efforts of implementing international commitments. We set out to answer the following research questions:

- How can we categorize the modes of governance of large carnivores in Norway, Sweden, and Finland?
- What are the similarities and differences between and across governance modes for large carnivore governance in these three cases?

### **Modes of Governance as a Sorting Instrument**

To facilitate comparison, we use a framework developed by Driessen et al. (2012) to study shifts in modes of environmental governance, where policy formulation and implementation works in relation to multiple actors interacting at multiple levels, over time. The framework differentiates between governance modes by categorization, which enables mapping of a complex structure of formal institutions in an intelligible way and thereby aids comparison across different modes.

Driessen et al. (2012) identify five modes of governance, differentiated by the relationships between the state, civil society, and the market: *centralized governance*, *decentralized governance*, *public-private governance*, *interactive governance*, and *self-governance*. In both centralized and decentralized governance, the state plays a central role, while the market and the civil society are recipients of government policies and adjust accordingly. Public-private governance focuses on cooperation between market actors and the state. Within interactive governance, a variety of actors are involved and collaborating on equal terms, whereas self-governance refers to private cooperation with high autonomy from state involvement (Driessen et al. 2012, 145–148).

The framework differentiates the five modes of governance according to three main clusters of features: *actor*, *institutional*, and *policy content* (Driessen et al. 2012, 148). The analysis of actor features asks questions of who initiates policy; the roles and positions of stakeholders; the policy level at which decisions are made; and the basis of power of main actors. Institutional features cover models of representation; rules for interaction; and mechanisms for interaction between actors at different levels. Features concerning policy content include the nature of goals and targets; the main policy instruments adopted; the type of knowledge used; and whether and how policy integration occurs.

Table 1 (adapted from Driessen et al. 2012, 146–147) illustrates the variation of the three clusters of features in relation to the five modes of governance.

Different solutions to large carnivore governance issues are connected to different modes and to certain institutional designs. However, governance modes are always embedded in existing political and institutional traditions and contexts. They respond to

**Table 1.** Theoretical framework of governance modes.

	Centralized governance	Decentralized governance	Public–private governance	Interactive governance	Self-governance
<b>Actor features</b>	Central government agencies, national level, authority, democratic representation at national level	Government at various levels, stakeholder involvement, authority, democratic representation at lower levels	Private sector, central government, and market stakeholders, local to international level, competitiveness	Multiple actors, equal roles, multiple levels, legitimacy, trust, knowledge	Private sector and civil society, self-governing entities, local to international level, autonomy, social capital, group size, leadership
<b>Institutional features</b>	Pluralist, formal rules, top-down, command-and-control	Pluralist, formal rules, subnational government decide about collaborations	Corporatist, formal and informal rules, private actors decide about collaborations	Public-social or public private arrangements, institutions in its broadest form, social learning, deliberation, negotiations.	Private–private partnerships, informal rules, bottom-up, social learning, deliberation, negotiations.
<b>Policy content</b>	Uniform goals, legislation, norms, sectorial, expert knowledge	Uniform goals, public covenants, sectorial, expert knowledge, room for time- and place specific knowledge	Uniform goals, actor specific, incentive based instruments, sectorial, dominance of time- and place specific knowledge, experts and consumers	Tailor-made integrated goals, negotiated agreements, integrated policy sectors and levels, transdisciplinary.	Tailor-made goals, voluntary instruments, private contracts, sectorial to integrated, dominance of issue and time- and place specific knowledge

and are dependent on previously identified challenges to governance, such as how to design representation and participation mechanisms, and they are designed to achieve certain goals, for instance, increased legitimacy and/or effectiveness (Rothstein 1992). Through investigation of the features of how the countries have designed their governance systems to meet both the requirements of international conventions on collaboration and the governance of large carnivore issues, we open up for further understanding of the challenges connected to the chosen mode—both as underlying drivers and consequences of certain solutions—and the contexts in which solutions are proposed and implemented.

## Materials and Methods

Our material covers policies and research published between 2006 and 2015. This choice allows us to focus on recent policy events and to build on similar mappings made in previous studies (Sandström et al. 2009).

To map current governance modes, we have analyzed policy documents, collected through the following of references to policies and “white papers” from previous research and searches in governmental and parliamentary databases. To avoid the problem of publication bias, we have also included gray literature—e.g., public investigations, evaluations, and academic theses; found using web search engines (Appendix 1) to complement official policy documents.

To assess and compare results from previous research, we have reviewed research articles investigating different aspects of governance of large carnivores, selected based

on three criteria: period, data, and study object. As stated above, our review covers articles published between 2006 and 2015. To be useful to the qualitative approach taken in this study, the data analyzed in the selected articles needed to be qualitative (Major and Savin-Baden 2010, 51). To be included, the research should have studied some aspect of governance of large carnivores in at least one of our chosen cases—Norway, Sweden, or Finland. The search for and collection of articles was conducted in March 2015, using four databases: Google Scholar, Scopus, Web of Science and Academic Search Elite (see Appendix 1 for a list of key search words). The search provided 73 scientific articles discussing governance of large carnivores of which 34 of these had studied at least one of the three cases, and 9 studies scored on all three criteria. All of the articles have contributed to knowledge and background information to the identified governance challenges, while only the 9 which scored on all the criteria were selected for in-depth analysis.

We have used an iterative analytical process, using a combination of open and theoretically informed coding to analyze the data. First, we made a qualitative categorization of current governance mode for each country according to the framework of Driessen et al. (2012), based on the collection of policy documents and gray literature. We identified actors and their roles, institutional features such as models of representation and policy content in terms of goals and instruments, and located the cases in the corresponding mode of governance. This allowed for a detailed mapping of the governance modes of our cases, refined by attention to the variation of the actor, institutional, and policy content features.

To assess the *actor features* of our cases, we interrogated the material for descriptions of actors identified as initiating and assuming the primary responsibility for carnivore policies, their position and location on the administrative and political scale, and their roles in the making and implementation of policy. For the *institutional features*, we looked for descriptions of the rules and mechanisms guiding collaboration, interaction, and communication. To categorize *policy content features*, we focused on the types of goals articulated at different levels and the policy instruments used to pursue them, the relationships between different sectors, and the types of knowledge referred to and used.

Second, we used the framework of Driessen et al. (2012) and the empirical questions described above to assess and review previous research findings. We searched the literature for problem formulations, results, and proposed solutions that we could connect to the categories, features, and modes of the framework, to detect how the contemporary research identifies, discusses, and proposes to solve issues of large carnivore governance. Each selected study was categorized into the framework (Table 1). We use the review of previous research to analyze and assess the potential and problems of different modes of governance, discuss similarities and differences between countries, and identify gaps in research.

Using this method based on the framework of Driessen et al. (2012) serves several purposes. It facilitates the comparison between governance structures, as it provides tools for categorization that allow us to map complex formal governance structures. Furthermore, it provides a way of mapping contemporary literature and enables comparison between practices and scientific literature as well as across studies in different countries—a necessity, given the interest of this study to explore the relationship between governance modes and contemporary literature rather than the relationship between a certain mode and outcomes. By comparing modes, comparing literature on different modes and comparing

literature to a formal mode, we approach governance in a somewhat novel way compared to typical examinations of informal institutions or legal frameworks.

Rather than analyzing the outcomes of particular modes in terms of legitimacy or efficiency, we will use existing knowledge for comparative purposes in pursuit of improved opportunities for learning between different governance systems. We focus on formal rather than informal (e.g., societal norms and values; cf. Eriksson 2016) institutions and we do not compare shifts over time. By going beyond analyses of output or outcome, we aim to make a contribution in terms of merging existing literature and identifying shared possibilities and obstacles between countries, thus enabling cross-country comparison and learning.

## Results

### *Categorization and Comparison of Governance Modes*

#### *Norway: Decentralized Governance*

**Actor Features.** Government agencies at the national and regional level are the main initiating actors in Norwegian large carnivore governance. At the national level, the main bodies are the Parliament (*Stortinget*), the Ministry of Climate and Environment,<sup>1</sup> and the Norwegian Environment Agency (NEA).<sup>2</sup> NEA is the government agency responsible for the inventory, population control, and conservation of large carnivores. At the regional level, eight Regional Large Carnivore Committees (RLCC; *Regionale Rovviltnemnder*), made up of indirectly elected officials from the county municipalities, have the responsibility to develop and adopt management plans, decide on hunting quotas as well as regional population targets for each of the carnivore species. The County Governors (*Fylkesmenn*; regional state agencies) act as the secretariat for the RLCCs, preparing decisions on economic compensation and permissions for preventative measures against carnivore attacks (Ministry of the Environment 2003).

**Institutional Features.** The model of representation is pluralist in form of municipality elections. Interactions among levels and actors are governed through legislation and fixed procedures decided at the national level (Ministry of the Environment 2003). The mechanisms for social interaction are set within top-down, predetermined structures, but lower levels of government have some decision-making power on how to organize collaboration. For example, the County Governors can decide on local involvement in protective hunting (Representantforslag 163 S (2010–2011)).

**Features Regarding Policy Content.** Most goals, including population sizes, are decided on the national level. The RLCCs can only allow hunting if population sizes is above the goal. This means that the RLCCs can put themselves out of power, which they also have done repeatedly. In these cases, the NEA takes over the management. There are regional differences depending on societal factors, particularly in relation to sheep grazing and the indigenous Sámi reindeer herding (Kränge et al. 2016). The applied instruments include management plans, different kinds of hunting permits and preventative or conflict-reducing measures such as fencing and monitoring. One method which is more prominent in Norway compared to Sweden and Finland is the use of zoning—the demarcation of a geographical area within, but not beyond, where large carnivores are allowed (Ministry of Environment 2003).

### **Sweden: Decentralized Governance**

**Actor Features.** As a member of the European Union, Sweden is bound by the Habitats Directive (Council Directive 92/43/EEC). At the national level, there is the parliament (*Riksdagen*), Ministry of Environment and Energy,<sup>3</sup> and the Swedish Environmental Protection Agency (SEPA). SEPA is responsible for national goal achievement. At the regional level, 20 of the 21 County Administrative Boards (CAB) have established regional wildlife management delegations (WMDs) consisting of a mix of politicians and stakeholder groups. Their responsibilities cover all wildlife—including, but not limited to, large carnivores. The WMDs are responsible for decisions on management plans and guidelines for wildlife management. They also recommend population size goals to a Council of Collaboration consisting of County Governors from each county within one of the three geographical zones (North, Middle, and South). The Councils of Collaboration give a consolidated recommendation to the SEPA, which makes the final decision (Swedish Gov. Bill 2012/13:191; Ordinance (2009:1474); Ordinance (2009:1263)).

**Institutional Features.** The model of representation is pluralist but with elements of corporatism, with indirectly elected politicians from the county council and stakeholder groups. There is an element of formalized public–social arrangements, as political parties and stakeholder groups nominate representatives to be appointed by the government to the WMDs (Ordinance (2009:1474): Sections 6 and 9). Although the rules of interaction are formal and set within fixed, nationally determined procedures, there is some flexibility in relation to the regional context as the CABs may decide autonomously on collaboration outside of the WMD's within these predetermined boundaries (Swedish Gov. Bill 2012/13:191).

**Features Regarding Policy Content.** Most goals are national and uniform, but with some regional differences depending on social factors—particularly in relation to Sámi reindeer herding and other forms of grazing. Management plans are adopted at the regional level, but coordinated within the three geographical zones (North, Middle, and South) and applied instruments include different kinds of preventative measures, e.g., fencing, monitoring, and protective hunting (Swedish Gov. Bill 2012/13:191).

### **Finland: Centralized Governance**

**Actor Features.** Like Sweden, Finland is a part of the EU, and the Habitats Directive (Council Directive 92/43/EEC) thus regulates its national legislation. At the national level, the parliament (*Eduskunta/Riksdagen*), the Department of Agriculture and Forestry, and the Finnish Wildlife Agency are responsible for the overarching large carnivore management. Moreover, the National Wildlife Council has a consultative role to the Finnish Wildlife Agency on hunting issues. In 2011, the Finnish government recentralized decision-making power from the Game Management districts to the Finnish Wildlife Agency. Fifteen Regional Wildlife Councils were established, which along with local Game Management Associations constitute platforms for collaboration and communication on the regional and local levels. The Regional Wildlife Councils each have 10 members representing various stakeholder interests. They serve as a consultative body working with the issues of management, service, and administration. The local Game Management Associations have originated from voluntary action to aid state authorities with monitoring, hunting, education, and other tasks. Each association has one coordinator responsible

for the overarching work within the association and for communication with the Finnish Wildlife Agency (Wildlife and Game Management Act (158/2011)).

***Institutional Features.*** The model of representation is mainly pluralist through national elections to parliament. The rules of interaction and mechanisms for social interaction are formal, with legislation and policies decided at the national level. There are voluntary forums where affected stakeholders can discuss issues and advise state authorities at regional and local levels, but they have no formal power over management (Sandström et al. 2009). The key mechanism for social interaction is public hearings and commenting procedures in relation to the management plans of the individual large carnivore species, where actors are invited to participate and discuss concerns with state officials (Pohja-Mykrä and Kurki 2013).

***Features Regarding Policy Content.*** Goals and targets are uniform, decided on the national level. Instruments used in management include management plans, hunting permits, payments, and public information (Finnish Wildlife Agency 2015).

To summarize, the features of Norway's and Sweden's large carnivore governance corresponds to decentralized governance, although the Swedish mode contain corporatist elements, while Finland exhibit more features of centralized governance despite the authoritative provisions at multiple levels from the national to the local (Table 2).

### ***“State of the Art”—Literature on Large Carnivore Governance***

For the Norwegian case, the literature shows that decision-making is clearly divided between actors and levels. However, *Removed by SNR* argues that the involvement of regional and local actors is limited in the Norwegian governance mode (see also Kränge et al. 2016). By this design, the state has instead enhanced its own role in governance. The authors identify the problem with current carnivore governance in Norway to be a lack of formal downward accountability in the regional design of large carnivore committees. Since members of the regional committees are only upward accountable, the “decentralization strategy” more resembles a deconcentration of power from the national level. *Removed*

**Table 2.** Categorization of governance modes.

	Norway	Sweden	Finland
<b>Governance mode</b>	Decentralized	Decentralized	Centralized
<b>Actor features</b>	National/regional policy-level, involvement of stakeholders, authority/legitimacy, central agency control	Central agencies, supra/national/regional policy-level, involvement of stakeholders, authority/legitimacy	Central agencies, supra/national policy-level, authority
<b>Institutional features</b>	Sub-national government hold collaborations within top-down determined boundaries, formal rules	Sub-national government hold collaborations within top-down determined boundaries, formal rules	National elections, top-down, sub-national government can initiate collaborations within top-down determined boundaries
<b>Policy content</b>	Uniform and level specific goals and targets, sectorial	Uniform and level specific goals and targets, legislation, sectorial, primacy of generic expert knowledge; room for issue and time-and-place specific knowledge	Uniform goals, legislation, sectorial primacy of scientific knowledge

by SNR proposes to incorporate a mechanism of accountability and involving regional and local actors to a greater extent. Similarly, Skogen (2015) argues that despite considerable state expenditures, the well-established Norwegian economic support system for the agricultural sector has had little success in solving social conflicts over wolf predation (see also Kränge et al. 2016). Skogen (2015) holds that greater involvement of regional and local actors, and a more inclusive definition of who the stakeholders are, would improve wolf governance and mitigate or solve conflicts between anti- and pro-wolf groups.

The Swedish case studies show mixed results in terms of representation of different stakeholders and actors. von Essen's (2012) results indicate a broad representation of different actors in the Wildlife Management Delegations at the regional level but also show how the role of delegate can be confusing—the delegates are simultaneously trustees/representatives of their respective organizations or interests and take a part of the decision-making authority. The study of Lundmark and Matti (2015) shows an overrepresentation of hunter/outdoor interests, as representatives tend to represent themselves/participate mainly for personal interest reasons rather than the political or stakeholder interest they are formally representing. There seems to be a misfit between the formal institutional arrangement and members' expectations in that the delegation meetings lack reasoned debate, the role of the chairperson is problematic, and there is a pressing need to make decisions rather than communicating properly. There is also a perception of restricted ability to influence the top-down structure (von Essen 2012; Hallgren and Westberg 2015).

In Finland, the literature indicates the prevalence of mistrust between actors, both horizontally (between stakeholders within levels) and vertically (between state actors and stakeholders across levels), and that the lack of influence from regional and local actors increases the perception of governance of large carnivores as illegitimate. Borgström (2012) argues that there is a faulty procedural design in terms of which actors are represented and to what extent representatives actually participate. Hiedanpää (2013) and Heikkinen et al. (2011) argue that it is problematic that the regional level is only an advisory body and does not have any decision-making power. Heikkinen et al. (2011) depict a detrimental mistrust among stakeholders and state agencies regarding the management of large carnivores in Finland. The authors conclude that the Finnish management is in need of a revised co-management strategy where a model, similar to the regional committees in Norway and the WMD's in Sweden, should allow stakeholders (including state officials) to be represented, given the opportunity to deliberate, and eventually hold decision-making power.

Similarly, Hiedanpää (2013) argues that through the 2011 recentralization of carnivore governance, the Finnish government has dismantled power at the regional level. The author holds that collaborative measures would facilitate finding, redescribing, and creating new desirable goals and appropriate actions to large carnivore management. Borgström (2012) finds that the most beneficial of solutions is to use procedural instruments such as voluntary community-based environmental protection—this would, however, require extensive public participation and local governance which the author deems unlikely considering Finland's governing history. The regional committees serve as forums for cooperation and information exchange and facilitate interactions between actors but without formal decision-making power, it is argued that actors expectation will never be met, thus the governance will never be legitimate.

For all three cases, the policy documents analyzed largely lack any discussion of policy integration or the policy–science interface. In Finland, there is some indication of the primacy of expert knowledge (Heikkinen et al. 2011).

### ***Similarities and Differences***

The studies of Sweden and Finland indicate a “misfit” between institutional arrangements and what stakeholders expect from the process. A possible proposal to avoid this issue of misfit is to build power based on sociological legitimacy, where affected actors decide on forms of collaboration (which procedures to use and how to build trust and sharing of knowledge) rather than building power based on state authority and the right to rule (Borgström 2012; von Essen 2012; Hallgren and Westberg 2015; Lundmark and Matti 2015). To our knowledge, this issue has not been discussed in contemporary literature in Norway.

The studies of Finland and Sweden all highlight the concept of communication. This concept was not a part of our theoretical framework, but emerged through the open coding of the literature. In the Finnish case, researchers promote collaboration to establish common goals and agree on procedures and actions in management (Borgström 2012; Pohja-Mykrä and Kurki 2013). In Sweden, communication among participants in various forms and settings is equally encouraged, for example, the management structure should encourage interpersonal relationships between stakeholders (von Essen 2012; Hallgren and Westberg 2015).

Another key similarity between the countries is the problem of involving stakeholders in a way that all relevant actors perceive to be fair and equal. In all three cases, there is a demand by the authors for taking steps away from top-down, hierarchical governance. Similarly, several authors argue that engaging local and regional actors in the process must increase in terms of both inputs, decision-making and implementation. The common denominators include (1) increased participation from lower levels; (2) more local governance; (3) incorporation of influence from relevant actors in the process of management; and (4) building collaborative governance between state and private actors with the objective to share responsibilities, risks, and benefits (Sandström et al. 2009; Heikkinen et al. 2011; Borgström 2012; von Essen 2012; Hiedanpää 2013; Pohja-Mykrä and Kurki 2013; Hallgren and Westberg 2015; Lundmark and Matti 2015; Skogen 2015).

Considering differences between the studies of the three cases, we note a general lack of literature from Norway. In Sweden, the research focus is on regional wildlife management delegations and on ways to create deliberation and legitimacy through that unit. In Finland, the focus is on the relation to EU and how to design a co-management model that meets the criteria for “good” governance. Both the Swedish and the Finnish EU membership results in a set frame for what the national levels can do in terms of decision-making and implementation in the carnivore issue. However, this issue is much more highlighted in the case of Finland. Borgström (2012) discusses this as a problem of legitimacy, in that citizens are not allowed to make decisions on matters that affect them directly. Heikkinen et al. (2011) and Borgström (2012) also problematize the national government’s role to both implement EU directives and satisfy citizens’ interests. The Finnish governance system is especially influenced by the two separate infringement processes that the EU Commission has started against Finland (2005, 2007). Therefore, this issue receives a lot of attention, both in management and in research. Similarly, Sweden has been brought

to an infringement process (Darpö 2011) which indicates a strong top-down control from the supranational level. However, this control function is seldom discussed in the reviewed literature. Furthermore, despite this top-down control (Table 2) and even though Swedish large carnivore policy is framed by European policy, it still engages stakeholders at a regional level in a systematic way compared to the Finnish recentralization.

Based on our comparison, we argue that Norway seems to have fewer issues with its governance of large carnivores than its neighboring countries, as the current and proposed modes overlap. However, as described above, this could be explained by the comparatively fewer studies of the Norwegian case. There is a lack of research done regarding governance features such as actor positions, the construction of power, and policy content in Norway.

The case of Sweden displays a gap between current mode and proposed mode. The studies of Sweden largely revolve around theory on deliberation to achieve legitimacy, which could be considered a narrow view of governance. Compared to Norway, the literature on Sweden largely lacks a holistic take on the governance system and leaves out most features regarding policy content (although more recent research has attempted to fill this gap—see for example, Hansson 2017). In the literature on Norway, it is instead actor positions that are less well covered.

In Finland, the gap between the recentralization of decision-making and the extensive collaborative measures and local ownership argued for in the selected studies show the greatest discrepancy between current and proposed governance modes of the three cases.

All cases display problems concerning the representations of actors, and there is a general lack of critical consideration of which actors participate, and how. Paradoxically, representation seems to be measured primarily from a representative democracy perspective and not, as would have been expected given the normative focus, from a deliberative democracy or interactive governance perspective. The literature also points to problems with accountability, mainly concerning the design of mechanisms for downward accountability.

The top-down model in Finland lacks a clear collaborative approach. The decentralized Norwegian model fails to involve affected actors from regional and local levels. The Swedish model of decentralization fails to meet crucial criteria including power sharing and communication within the collaborative unit. Sweden has become the furthest compared to Norway and Finland in terms of interactive elements, where robust decentralization of power and carefully designed deliberative practices seems like a way forward.

In the reviewed literature, stakeholder involvement in large carnivore governance is often the main topic of analysis, while other actor features (as defined in the governance mode framework) are seldom discussed. The studies tend to focus on different segments or sections of governance systems. This restricts the possibility for comprehensive conclusion on the functioning of governance systems and limits the feasibility for cross-country comparison.

A majority of the reviewed studies argue that legitimacy in the governance of large carnivores should originate from agreements on roles, positions, procedures, and processes. They promote the strengthening of stakeholder influence as a solution to problems of trust, argue that trust should be built among all actors, and contend that sharing of knowledge should be organized in ways that do not privilege specific types of knowledge over others (Borgström 2012; von Essen 2012; Hallgren and Westberg 2015; Lundmark and Matti 2015). In other words, they argue that the basis for power should stem from deliberative governance theory.

However, none of the studies explicitly challenges the key assumptions underlying deliberative theory. It is clearly presented as an ideal, but given the current knowledge we cannot find one success story among our cases to support this assumption. Rather, the conflicts seem to deepen (Duit and Löff 2015; Hallgren and Westberg 2015; Skogen 2015; Eriksson 2016).

## Concluding Remarks

The first research question has been answered through the categorization of governance modes, as illustrated in Table 1. We categorized the Swedish and Norwegian governance modes as decentralized, whereas the features of Finland indicated a centralized governance mode.

The answer to the second question regarding similarities and differences is that none of the currently implemented collaborative modes follows recommendations neither in the international conventions that the countries have ratified nor in the selected literature. Based on the literature, we find that the focus of the analysis differs between the cases, but a majority of the studies promote elements included in the interactive governance mode. These include deliberation, legitimacy, agreements on roles and procedures, trust-building and decision-making power. Because governance theory predicts that legitimacy, democracy, and effectiveness depend on the number of interactive elements (Bäckstrand et al. 2010; Berkes 2010; Emerson, Nabatchi, and Balogh 2012), we hypothesize that the outcomes of these systems in terms of legitimacy, democracy, and effectiveness do not meet the requirements of international commitments and thus are far from desirable. This connection between mode and outcome, and the basic assumption that interactive elements are desirable could be tested in further research through experimental trials of effects on conflict levels, perceptions of legitimacy and perceptions of various democratic indicators from involved actors, where the number of interactive elements is increased under controlled forms. A second potential way forward would be to explore outcomes by making a measurement of legitimacy, democratic, and effectiveness increases, to then compare it to the stated policy goals in search of coherence.

Both the governance systems and the research community face several challenges. If the interactive/deliberative ideal is indeed preferable as stated in, e.g., the CBD, policymakers in all three countries will have to incorporate interactive elements to much larger extent when designing governance systems. However, here follows two important implications. First, the basic assumptions of deliberative theory need to be subjected to further empirical testing. Second, at the same time as international regulations urge interaction and deliberation, it also constrains national processes and outcomes, most often by legal instruments, thus creating a paradox for national policymakers to solve. How to solve such paradox should also be examined further.

A theoretical implication is the need for systematic comparison across countries to know what lessons can be learned from other modes, to avoid having to constantly “reinvent the wheel.” There are some good examples of such attempts (Stöhr and Coimbra 2013), but there is a need for consistent use of theoretical concepts. Results are likely to differ between studies examining the same case, as different concepts such as “deliberation” or “legitimacy” can be—and are—interpreted and applied in various ways. Thus, we see a need to develop a theoretical device to compare between governance modes and across countries with different political systems.

## Notes

1. Before 2014: Ministry of the Environment.
2. Before 2013: the Norwegian Directorate for Nature Management (DN).
3. 2006–2014: the Ministry of the Environment.

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## References

- Bäckstrand, K., J. Khan, A. Kronsell, and E. Lövbrand. 2010. The promise of new modes of environmental governance. In *Environmental politics and deliberative democracy: Examining the promise of new modes of governance*, ed. K. Bäckstrand, 3–27. Cheltenham and Northampton: Edward Elgar Publishing.
- Berkes, F. 2010. Devolution of environment and resources governance: Trends and future. *Environmental Conservation* 37 (4):489–500.
- Bodin, Ö. 2017. Collaborative environmental governance: Achieving collective action in social-ecological systems. *Science* 357:6352. <http://science.sciencemag.org/content/357/6352/eaan1114.full>
- Borgström, S. 2012. Legitimacy issues in finnish wolf conservation. *Journal of Environmental Law* 24 (3):451–76.
- Clark, S., M. B. Rutherford, and D. J. Mattson. 2014. Large carnivores, people, and governance. In *Large carnivore conservation: Integrating science and policy in the North American West*, ed S. G. Clark and M. B. Rutherford, 1–28. Chicago: University of Chicago Press. doi: 10.7208/chicago/9780226107547.003.0001
- Council of Europe. 1979. Convention on the conservation of European wildlife and natural heritage. Bern, Switzerland. <http://conventions.coe.int/Treaty/EN/Treaties/Html/104.html> (accessed 31 March 2015)
- Darpö, J. 2011. Brussels Advocates Swedish Grey Wolves: On the encounter between species protection according to Union law and the Swedish wolf policy. SIEPS Policy Analysis 2011: 8, available in full text on [www.jandarpö.se/In\\_English](http://www.jandarpö.se/In_English).
- Dingwerth, K. 2007. *The new transnationalism: Transnational governance and democratic legitimacy*. Basingstoke: Palgrave Macmillan.
- Document 8:163 (Representantförslag 163 S. 2010–2011. Rovviltförliket. <https://www.stortinget.no/globalassets/pdf/representantforstag/2010-2011/dok8-201011-163.pdf> (accessed 9 December 2016)
- Driessen, P. P. J., C. Dieperink, F. van Laerhoven, H. A. C. Runhaar, and W. J. V. Vermeulen. 2012. Towards a conceptual framework for the study of shifts in modes of environmental governance—experiences from the Netherlands. *Environmental Policy and Governance* 22 (3):143–60.
- Duit, A., and A. Löf. 2015. Dealing with a wicked problem? A dark tale of carnivore management in sweden 2007–2011. *Administration & Society*. doi: 10.1177/0095399715595668
- Emerson, K., T. Nabatchi, and S. Balogh. 2012. An integrative framework for collaborative governance. *Journal of Public Administration Research and Theory* 22 (1):1–29.
- Eriksson, M. 2016. Changing attitudes to Swedish wolf policy - Wolf return, rural areas and political alienation. Diss., Department of Political Science, Umeå University.
- European Commission. 1992. Council Directive 92/43/EEC. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.
- Finnish Wildlife Agency. 2015. *För viltet*. Helsingfors: Finlands Viltcentral. <http://riista.fi/wp-content/uploads/2013/03/ForViltet2015ruwww.pdf> (accessed 9 December 2016).

- Hallgren, L., and L. Westberg. 2015. Adaptive management? Observations of knowledge coordination in the communication practice of Swedish game management. *Wildlife Biology* 21 (3):165–74.
- Hansson, K. 2017. Assessing total legitimacy in Swedish large carnivore policy. Master's thesis. Department of Political Science, Umeå University.
- Heikkinen, H. I., O. Moilanen, M. Nuttall, and S. Sarkki. 2011. Managing predators, managing reindeer: Contested conceptions of predator policies in Finland's southeast reindeer herding area. *Polar Record* 47 (3):218–30.
- Hiedanpää, J. 2013. Institutional misfits: Law and habits in Finnish wolf policy. *Ecology and Society* 18 (1):24.
- Holling, C. S., and G. K. Meffe. 1996. Command and control and the pathology of natural resource management. *Conservation Biology* 10 (2):328–37.
- Jentoft, S. 2000. Legitimacy and disappointment in fisheries management. *Marine Policy* 24 (2): 141–48.
- Knight, J. 2003. *Waiting for wolves in Japan: An anthropological study of people-wildlife relations*. New York: Oxford University Press.
- Krange, O., C. Sandström, T. Tangeland, and G. Ericsson. 2017. Approval of wolves in Scandinavia: A comparison between Norway and Sweden. *Society and Natural Resources* 30 (9):1127–40. doi:10.1080/08941920.2017.1315652.
- Krange, O., J. Odden, K. Skogen, J. D. Linnell, H. B. Stokland, S. Vang, and J. Mattisson. 2016. *Evaluering av regional rovviltforvaltning*. Oslo: NINA Rapport 1268.
- Lange, P., P. P. J. Driessen, A. S. B. Bornemann, and P. Burger. 2013. Governing towards sustainability: Conceptualizing modes of governance. *Journal of Environmental Policy and Planning* 15 (3):403–25.
- Linnell, J. D. C., and L. Boitani. 2012. Building biological realism into wolf management policy: The development of the population approach in Europe. *Hystrix, the Italian Journal of Mammalogy* 23 (1):80–91.
- Lundmark, C., and S. Matti. 2015. Exploring the prospects for deliberative practices as a conflict-reducing and legitimacy-enhancing tool: The case of Swedish carnivore management. *Wildlife Biology* 21 (3):147–56.
- Lundmark, C., S. Matti, and A. Sandström. 2014. Adaptive co-management: How social networks, deliberation and learning affect legitimacy in carnivore management. *European Journal of Wildlife Research* 60 (4):637–44.
- Major, C. H., and M. Savin-Baden. 2010. *An introduction to qualitative research synthesis: Managing the information explosion in social science research*. Milton Park: Routledge.
- Ministry of the Environment. 2003. Rovvilt i norsk natur. St.meld. nr. 15, 2003–2004. <https://www.regjeringen.no/no/dokumenter/stmeld-nr-15-2003-2004-/id403693/?ch=1&q=> (accessed 8 October 2016).
- Newig, J., and O. Fritsch. 2009. Environmental Governance: Participatory, Multi-level – and effective? *Environmental Policy and Governance* 19:197–214.
- Ordinance. 2009:1263. On the management of bear, wolf, wolverine, lynx and golden eagle. [https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-20091263-om-forvaltning-av-bjorn\\_sfs-2009-1263](https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-20091263-om-forvaltning-av-bjorn_sfs-2009-1263) (accessed 9 December 2016).
- Ordinance. 2009:1474. On wildlife management delegations. [https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-20091474-om\\_sfs-2009-1474](https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-20091474-om_sfs-2009-1474) (accessed 9 December 2016).
- Pahl-Wostl, C., M. Craps, A. Dewulf, E. Mostert, D. Tabara, and T. Tallieu. 2007. Social learning and water resource management. *Ecology and Society* 12:2. URL: <http://www.ecologyandsociety.org/vol12/iss2/art5/>
- Pohja-Mykrä, M., and S. Kurki. 2013. *Suurpetopoliittikka kriisissä – salakaadot ja yhteisön tuki*. Translated by Inkaliisa Voionmaa. Helsinki: University of Helsinki, Ruralia Institute.
- Pomeranz, E. F., D. J. Decker, W. F. Siemer, A. Kirsch, J. Hurst, and J. Farquhar. 2014. Challenges for multilevel stakeholder engagement in public trust resource governance. *Human Dimensions of Wildlife* 19 (5):448–57.

- Redpath, S. M., J. D. Linnell, M. Bianchet, L. Boitani, N. Bunnefeld, A. Dickman, R. J. Gutiérrez, R. J. Irvine, M. Johansson, A. Majić, et al. 2017. Don't forget to look down – collaborative approaches to predator conservation. *Biological Reviews* 92:2157–63. doi:10.1111/brv.12326
- Rothstein, B. 1992. *Den korporativa staten: intresseorganisationer och statsförvaltning i svensk politik*. Stockholm: Norstedts juridik.
- Sabatier, P., W. Focht, M. Lubell, Z. Trachtenberg, A. Vedlitz, and M. Matlock. 2005. *Swimming upstream: Collaborative approaches to watershed management*. Cambridge, Mass: MIT Press.
- Sandström, C., J. Pellikka, O. Ratamäki, and A. Sande. 2009. Management of large carnivores in Fennoscandia: New patterns of regional participation. *Human Dimensions of Wildlife* 14 (1):37–50.
- Sjölander-Lindqvist, A., M. Johansson, and C. Sandström. 2015. Individual and collective responses to large carnivore management: The roles of trust, representation, knowledge spheres, communication and leadership. *Wildlife Biology* 21 (3):175–85.
- Skogen, K. 2015. The persistence of an economic paradigm: Unintended consequences in Norwegian wolf management. *Human Dimensions of Wildlife* 20 (4):317–22.
- Stöhr, C., and E. Coimbra. 2013. The governance of the wolf-human relationship in Europe. *Review of European Studies* 5 (4):1–18.
- Swedish Governmental Bill. 2012/13:191. En hållbar rovdjurspolitik. <http://www.regeringen.se/49bb9c/contentassets/af7ef44fdb8410bbadbbd117e033ced/en-hallbar-rovdjurspolitik-prop.-201213191> (accessed 9 December 2016).
- United Nations Conference on Environment and Development (UNCED). 1992. *Agenda 21*. New York: United Nations.
- United Nations Economic Commission for Europe (UNECE). 1998. Aarhus convention. <http://www.unece.org/env/pp/treatytext.html> (accessed 31 March 2015).
- United Nations Environment Program (UNEP). 1992. Convention on biodiversity. <https://www.cbd.int> (accessed 31 March 2015).
- von Essen, E. 2012. Democracy and Sustainable Development in wildlife management: From 'stakeholders' to 'citizens' in the Swedish wolf restoration process. Master's thesis, Department of Earth Sciences, Uppsala University.
- Wildlife and Game Management Act. 158/2011. Finnish ministry of justice. <http://www.finlex.fi/sv/laki/ajantasa/2011/20110158> (accessed 9 December 2016).

## Appendix 1: Search Words and Web Search Engines

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### Search words (alphabetized)

Brown bear  
 Collaborative  
 Conflict  
 Decentralization  
 Environmental  
 Finland  
 Governance  
 Human–carnivore conflict  
 Institutional  
 Large carnivores  
 Leadership  
 Lynx  
 Management  
 Norway  
 Policy  
 Political  
 Political science  
 Sweden  
 Wolf  
 Wolverine

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Web search engines (alphabetized)

Finnish Parliament: <http://www.finlex.fi/sv/>

Finnish Wildlife Central: <https://riista.fi/sv/viltforvaltningen/finlands-viltcentral/>

Google: [www.google.com](http://www.google.com)

Norwegian Parliament: <https://stortinget.no/no/Saker-og-publikasjoner/Saker/?ptid=L#list>

Norwegian County Governor: <https://www.fylkesmannen.no>

Swedish Environmental Protection Agency: <http://www.naturvardsverket.se/>

Swedish Parliament: <http://www.riksdagen.se/sv/dokument-lagar/>

Yahoo: [www.yahoo.com](http://www.yahoo.com)

Zeteo: <https://zeteo.wolterskluwer.se/home>

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