Disentangling adaptive multi-level governance designs and their outcomes: a comparative analysis of water- and wildlife management in Sweden

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Abstract

The Swedish systems for water- and wildlife management involve a vertical and horizontal shift in authority: from the national level to the supranational and sub-national levels; and from public authorities to collaborative arenas composed of both public and private actors. The new systems have introduced new decision-making structures and institutionalized stakeholder involvement in public policy making. Thus, they provide good examples of both multi-level and adaptive governance systems. Since institutional design is a balancing act of considerations and trade-offs, the formation of these new governance systems might solve one problem while giving rise to others. Multi-level governance structures, with participatory elements, challenge the idea of a hierarchic and functional division of authority and have democratic implications. Multi-level designs are based on different principles and can, accordingly, be expected to respond differently to various governance quandaries (such as adaptability, effectiveness and legitimacy). While the systems for water- and wildlife management share similarities through stakeholder involvement and implementation of a new multi-level governance structure, they also contain important differences as they are designed on different logics and in order to address and solve different types of problems. While the water governance design to a large extent is ecosystem-based and aims at achieving good water quality; the wildlife governance design builds on social representation through stakeholder involvement and aims to build legitimacy in a conflict-ridden policy area. However, when scrutinizing current government governance typologies, we find that they are too broad to disentangle the defining features of different multi-level governance designs visible in contemporary environmental management; and that there is a knowledge gap regarding how these different institutional designs can be expected to affect governance outcome (i.e. adaptivity, effectiveness and legitimacy). The paper outlines an analytical framework to address these theoretical shortcomings through a comparative study of the Swedish systems for water- and wildlife management.

Introduction

How can the different institutional designs for multi-level governance, visible in contemporary environmental management, be theoretically conceptualised through merging multi-level governance and adaptive governance theory; and how do these different multi-level governance designs affect governance outcome in terms of policy learning, policy coherence and policy consent – key factors for adaptive, effective and legitimate governance? These critical questions are addressed in this paper through outlining the analytical framework for a comparative analysis of water- and wildlife management in Sweden. The study contributes to a refined theoretical understanding of the defining features of different multi-level governance designs and of the consequences for governance outcome of different institutional designs.
Current Swedish adaptive multi-level governance designs: similar but different

To mirror the complexity of social-ecological problems, and as a response to the shortcomings of state-centralised systems to address this complexity, requests for new governance systems based on the ideas of adaptive governance are articulated by both researchers and policymakers (Olsson et al 2004; Gunderson and Holling 2002; Armitage et al 2009; Lee 1999). Adaptive governance theory emphasises the fit and interplay between the social- and ecological systems and implies governance systems that are polycentric (that is, involves multiple centres of authority), support stakeholder participation, make use of experimentation as a way of increased learning, and that matches the boundaries of ecosystems (Huitema et al 2009). These types of systems are believed to be more responsive, i.e. adaptive, to changes in the socio-ecological system (Olsson et al 2004). We see an ongoing institutional change towards the formation of new governance structures in line with the above (e.g. Bäckstrand et al 2010; Driessen et al., 2012; Young 2002).

Recent changes in the Swedish systems for water- and wildlife management are good illustrations of this trend. Since 2004, water management is ecosystem-based and involves of a web of multiple layers of ‘nested enterprises’ (Lundqvist 2004). The Swedish implementation of the EU Water Framework Directive (EP and C 2000/60/EG; European Communities 2003), has introduced a new, meta-regional, level of governance where five River Basin District Authorities (Vattenmyndigheter) are in charge of water issues. Overarching responsibilities have been allocated to five regional Water District Boards (Vattendelag), including the promulgation of water environmental quality standards, management plans and programs of measures (Water Quality Management Ordinance, VFF 2004:660). Simultaneously, new governance arrangements including stakeholder involvement have been put in place where local Water Boards (Vattenråd) are involved in the water governance system. The Swedish Agency for Marine and Water Management (SwAM, Havs- och vattenmyndigheten) has the overarching responsibility on the national level for the Swedish implementation the Water Framework Directive and the Marine Strategy Framework Directive. In completing their task SwAM works closely together with other state level agencies such as the Swedish Environmental Protection Agency (SEPA) and the Swedish Board of Agriculture, as well as with county administrative boards and municipalities.

The current system for wildlife management was introduced in 2010 (and later modified in 2013) as a response to experienced policy legitimacy deficits, especially in regards to large carnivores (Bill 2008/09:210). Corporate committees with stakeholder representatives had been consulting the policy-making processes on the national and regional levels for many years (e.g. Regionala rovdjursgrupper and Nationella rådet för rovdjursfrågor) (Bill 2008/09:1; Bill 2000/01:57; Sandström and Eriksson 2009). In the new governance system, however, the regional level was further empowered and the mandate of stakeholder representatives extended through the formation of Wildlife Conservation Committees (WCCs) (Viltförvaltningsdelegationer), composed of political and organizational representatives, on the county level (Matti and Sandström 2011; 2013). Three councils (Samverkansråd) on the meta-regional level were set up as the link between the WCCs and the Swedish Environmental Protection Agency (SEPA). On the national level, a national council of concerned interests organisations (Nationella rådet för rovdjursfrågor) assists SEPA in decision-making and on the supra national level, the EU level

Thus, the Swedish systems for water- and wildlife management involve a vertical and horizontal shift in authority: from the national level to the supranational and sub-national levels; and from public authorities to collaborative arenas composed of both public and private actors. The new systems have introduced new decision-making structures and institutionalized stakeholder involvement in public policy making. These characteristics make them good examples of both multi-level governance systems (e.g. Bache and Flinders 2004; Eckerberg and Joas 2004) and adaptive governance systems (Huitema 2009).

Since institutional design is a balancing act of considerations and trade-offs, the formation of these new governance systems might solve one problem while giving rise to others (e.g. Lundqvist 2004). Multi-level governance structures, with participatory elements, challenge the idea of a hierarchic and functional division of authority (Bache and Flinders 2004; Skelcher 2005) and have democratic implications (Sorensen and Torfing 2007). Multi-level designs are based on different principles and can, accordingly, be expected to respond differently to various governance quandaries (such as adaptability, effectiveness and legitimacy). There is an acknowledged gap between adaptive governance as an ideal and its success in practice (Huitema et al 2009; Lee 1999). While the systems for water- and wildlife management share similarities through stakeholder-involvement and implementation of a new multi-level governance structure, they also contain important differences as they are designed on different logics and in order to address and solve different types of problems. While the water governance design to a large extent is ecosystem-based and aims at achieving good water quality; the wildlife governance design builds on social representation through stakeholder involvement and aims to build legitimacy in a conflict-ridden policy area. However, when scrutinizing current government-governance typologies, we find that they are too broad to disentangle the defining features of different multi-level governance designs visible in contemporary environmental management; and that there is a knowledge gap regarding how these different institutional designs can be expected to affect governance outcome. To address these theoretical shortcomings, we therefore suggest that a comparative study of the Swedish systems for water- and wildlife management provides is a good point of departure.

**Aim: a refined conceptual framework for disentangling designs and assess outcome**

The aim of the paper is to develop a refined conceptual framework for how to disentangle the defining features of different adaptive multi-level governance designs and examine the consequences of different designs for governance outcome. We adopt a comparative approach, across policy areas, in the rapidly evolving field of adaptive multi-level environmental governance. More specifically, we suggest that the policy systems for Swedish water- and wildlife management are relevant empirical settings to compare in order to answer the following research question:
How can the different institutional designs for adaptive multi-level governance, visible in contemporary environmental management, be conceptualised and how do different institutional designs affect governance outcome?

In this paper, we develop a conceptual framework and suggest three theory-derived hypotheses on the relation between governance design and governance outcome. We further suggest that the systems for water- and wildlife management in Sweden are a good point of departure for answering our research question. These two management systems share common features and diverge in regard to others, in ways that make them particularly suitable for the purpose of this paper. The paper problematizes and highlights challenges in the emerging phenomena adaptive multi-level governance and institutional design—a field still suffering from lack of both conceptual clarity and empirical evidence.

**Previous research in the field of new governance**

Previous research within the field of new governance has primarily studied the functioning of separate governance bodies (cf. co-management studies, Carlsson and Berkes 2005) or how public actors meta-govern these structures by the adoption of various public network management strategies (e.g. Sandström et al 2014; Sorensen and Torfing 2007). We adopt a policy subsystem perspective (Sabatier and Weible 2007) and propose a system-wide analysis. The subsystem perspective – addressing both the incorporated governance bodies as well as the interplay between these – is absolutely critical for the purpose of addressing the question of what consequences different institutional designs have for governance outcome.

The variety of different institutional arrangements within the realm of governance is immense, which is why it is difficult to make general statements concerning their capacities. Thus, “to get a better analytical grip on the limits and possibilities of governance in a world where change is nonlinear, uncertain, and imbedded in a diversity of multilevel systems ranging from the natural to the social world remains a matter of great concern for the future of governance theory” (Duit and Galaz 2008). Several frameworks have been developed as means to disentangle different types of governing modes. Driessen et al (2012) analyses actor features and institutional features and sketches five archetypes (centralized, decentralized, public-private, interactive and self-governance). Similarly, Pierre and Peters (2005) draws out three state-dominated governance models and two systems signified by a weak state, while Duit and Galaz (2008) analyses complex adaptive systems and discusses the adaptive capacity of four governance systems (rigid, robust, fragile and flexible). Hooghe and Marks (2003) separates between two main types of multi-level systems. Type 1 systems are similar to federative systems, characterized by general-purpose jurisdictions, non-intersecting memberships, jurisdictions at a limited number of levels and a system-wide architecture. In type 2 systems, jurisdictions are task-specific, memberships are intersecting, the number of jurisdictional levels is unlimited and the design is flexible. Skelcher (2005) makes an attempt to further refine the typology suggested by Hooghe and Marks (2003) and sketches three different forms of type 2 arrangements, namely clubs, agencies and polity forming. Clubs refers to self-organized groups formed as a response to
certain policy problems that gain legitimacy by the benefits of the involved actors; agencies are state initiated and mandated systems that receive legitimacy from the initiating agency; and finally, polities are governance bodies involving certain groups of actors in policy formulation and implementation gaining legitimacy from the stakeholder groups that they represent.

The above referred to frameworks and typologies are useful, although not sufficient for the purpose of this study. Different archetypes ranging from centralized governance to self-governance are far too sweeping to separate between the Swedish water- and wildlife systems. Similarly, the categorisation of type 1 and type 2 systems is too broad to detect differences since both systems would fall into the latter category. Moreover, while the typology of clubs, agencies and polity is useful for classifying governance bodies, it is important to acknowledge that a system might encompass a mixture of different governance bodies. Based on the above, a more refined conceptual framework is needed to disentangle the differences in current multi-level governance designs.

Disentangling different institutional designs through four key aspects

Our first research task is to develop a refined conceptual framework for how to disentangle the defining features of different multi-level governance designs. We here depart from research on multi-level governance and adaptive governance and suggest a conceptual framework including the following key aspects: the logic of institutional design, the type of polycentrism, the type of public participation and the type of knowledge/experimental approach. Variations in these aspects are understood as reflections of different institutional designs.

Logic of the design refers to the basic logic of the management system: whether the system is based on an administrative rationale, where the administrative decision-making levels are mainly determined by administrative traditions; or an ecological rationale, that is, where the administrative levels are mainly determined by their connection to the ecosystem (Lundqvist 2004; Huitema et al 2009).

The aspect of polycentrism will capture the vertical and horizontal division of authority in the system, thus the number of levels and governance bodies as well as the division of authority among these will be considered. Also the extent to which the system spans different policy sectors is regarded under this aspect. These issues determine the bounded integrity of the system (Huitema et al 2009; Skelcher 2005).

Participation concerns how the public-private interface is organized and how collaborative arrangements, involving the public in decision-making, are designed, in regards to what type of actors that are involved, how these are elected, the power relation among these and what kind of decision-making mandate the collaborative arena possess (Ostrom 2005). This aspect is also called the system’s relational integrity (Skelcher 2005).

Finally, the Knowledge and experimental approach refers to how the system has institutionalized processes for new knowledge mobilization and the use of experiments, e.g. routines for integrating new knowledge in policy making, the approach to new methods and the use of pilot studies in management (Huitema 2009).
Through examining the aspects outlined above, we hold that the institutional designs of different adaptive multi-level governance systems, such as the Swedish systems for water- and wildlife management, can be disentangled.

Assessing governance outcome: learning, coherence and consent

Our second research task is to analyze how governance outcome is affected from different institutional designs. We suggest three hypotheses on the relation between institutional design and governance outcome and propose to assess governance outcome in terms of policy learning (which is a key feature in adaptive governance); policy coherence (which is a key feature in effective governance); and policy consent (which is a key feature in legitimate governance).

Policy learning refers to alternations of actors’ understandings and beliefs, or frames of reference, in the light of new information and experiences (Sabatier and Weible 2007). The facilitation of policy learning is a central feature in adaptive governance systems (Huitema 2009) and the occurrence of policy learning within a multi-level governance subsystem is viewed here as an important marker of how adaptive the particular system is. Different categories of policy learning have been identified in previous research. Policy learning can be conceptualized in many different ways and arrays of analytical tools to distinguish different levels of learning have been identified in previous research (c.f. Söderberg 2011 for an overview of the field). In this study, we perceive policy learning as changes of beliefs on important policy matters (Sabatier and Weible 2007) and adopt the concept of ‘learning loops’ (Argyris and Schön, 1978) to distinguish different levels of learning. For this purpose, we separate between ‘single-loop learning’, here defined as instrumental learning on more specific management issues and ‘double-loop learning’ that involves changes in the normative notions regarding the very definition of the policy problem and overall policy goals (compare with Sabatier and Weible 2007 differentiation of beliefs). A large number of factors influence the likelihood of policy learning, e.g. the degree of complexity and uncertainty, the conflict level within the policy subsystem, the existence of forum for discussions (Sabatier and Weible 2007; Söderberg and Eckerberg 2013). It is commonly suggested that participation and collaborative arenas facilitate policy learning and that the integration of new knowledge and experimentation likely affect policy learning (Huitema 2009; Söderberg 2011). In line with this, our first hypothesis (H1) is that the way participation and knowledge processes are institutionalized affect the level of policy learning within the systems.

Policy coherence refers to systematic reduction of conflicts and promotion of synergies between and within different policy areas. Given that policy coherence strives towards goal-attainment (Nilsson et al 2012), coherence is viewed here as an important marker of the effectiveness of a governance system. Young (2002) emphasises that successful regimes “include steering systems that monitor progress toward desired ends and adjust regulatory and other provisions as needed to achieve these ends”. In this study we intend to outline the institutional consistency, or internal coherence, within water- wildlife policy when implemented on different levels. In line with Nilsson et al (2012), we will therefore outline and compare policy objectives, instruments and implementation across levels. Such an “objectives and implementation”-approach is also consistent with the view on policy coherence expressed in other studies (e.g.
Olsen 2008), as well as with Young’s (2002) view on successful regimes. Coherence might be difficult to obtain in multi-level governance/polycentric systems where the involvement of multiple actors and levels in policy-making may result in coordination problems leading to “unnecessary duplication of efforts and counterproductive actions” (Huitema et al 2009). Thus, polycentric systems also implies an increased risk for institutional inconsistencies, which “may both be the result of different approaches to the same problem as well as it may have to do with the fact that different actors pursue different objectives” (Olsen, 2008, p. 160). Huitema (2009) hold that in order to avoid such conflicts and “competency struggles between the different units” within polycentric systems, it is important to ensure that collaborative efforts and trust is developed in order to compensate for the lack of centralised coordination mechanisms and ensure policy coherence between levels. Accordingly, our second hypothesis (H2) is that the type of polycentrism affects policy coherence in the system.

*Policy consent,* i.e. support for the policy process and its outcome, is here understood as an important marker of the legitimacy of a governance system. Legitimacy is a critical feature of good governance and a key concept in the study of institutions. In its basic connotation the concept refers to the rightfulness of power relations and to what is considered as just and fair among those being governed, manifested through their expressed consent (Beetham, 1991; Matti, 2009; Lundqvist 2004). Legitimacy is a multifaceted concept. It can be understood as expressed consent both in relation to the governing process, i.e. in terms of input legitimacy, as well as in relation to the outcome of the process, i.e. in the form of output legitimacy (Scharpf 1999; Bäckstrand 2009). Furthermore, a distinction between internal and external legitimacy can be made (Provan and Kenis 2007). The former concept refers to consent among the actors that are part of the governance system and the latter to other concerned actors. This distinction is particularly relevant when studying multi-level governance systems with participatory features since they are nested governance structures (Ostrom 2005) with important connections to, and interdependencies with, other governance systems. In this study, we focus on the expressed consent among the actors directly involved in the management systems (as decision makers and administrators) on different levels and consent expressed by the concerned interest organizations that are directly connected to the system (through representation in the collaborative arenas). We examine how these actors perceive, and to what extent they express consent for the governance process and the decisions taken within the system. By doing so, differences in the levels of internal and external policy consent, for both input and output, in the two systems can be detected. The discussion on legitimacy in multi-level governance is complicated. On the one hand, warnings are raised that the polycentric features, with decreasing transparency and accountability, challenge the traditional democratic notion about legitimacy in which consent is expressed through elected representatives (e.g. Sorensen and Torfing 2007; Lundqvist 2004). On the other hand, based on deliberative democratic theory, the collaborative features of multi-level governance are as often proposed to increase legitimacy, and expressed consent, among the stakeholders that are directly included or indirectly represented in policymaking (e.g. Bäckstrand et al 2010). Thus, there are divergent assumptions about legitimacy and multilevel governance.
Through our third hypothesis (H3) we suggest that the type of polycentrism and participatory approach affect the level of policy consent within the system.

Conclusions and future research
We started this paper by posing the following question: how can the different institutional designs for multi-level governance, visible in contemporary environmental management, be theoretically conceptualised through merging multi-level governance and adaptive governance theory; and how do these different multi-level governance designs affect governance outcome in terms of policy learning, policy coherence and policy consent – key factors for adaptive, effective and legitimate governance? In the paper, we call attention to the fact that the current government-governance typologies are too broad to disentangle the defining features of different multi-level governance designs visible in contemporary environmental management. Furthermore, we claim that this lack of conceptual clarity makes it very difficult to come closer to understanding how these different new institutional designs can be expected to affect governance outcome. Therefore, we depart from research on multi-level governance and adaptive governance to suggest a refined conceptual framework including the logic of institutional design, the type of polycentrism, the type of public participation and the type of knowledge/experimental approach. Variations in these four aspects are understood as reflections of different institutional designs, and are therefore key features to examine in order to come closer to a refined conceptual understanding of the defining features of different multi-level governance designs visible in contemporary environmental management. Furthermore, we suggest that this refined conceptual framework can be used as a point of departure for further examining the relationship between institutional design and governance outcome. We present three hypotheses on the relation between institutional design and governance outcome and propose to assess governance outcome in terms of policy learning (which is a key feature in adaptive governance); policy coherence (which is a key feature in effective governance); and policy consent (which is a key feature in legitimate governance). Our first hypothesis (H1) is that the way participation and knowledge processes are institutionalized affect the level of policy learning within the systems. Our second hypothesis (H2) is that the type of polycentrism affects policy coherence in the system. Our third hypothesis (H3) is that the type of polycentrism and participatory approach affect the level of policy consent within the system.

The Swedish systems for water- and wildlife management share similarities through stakeholder-involvement and implementation of a new multi-level governance structure, while also containing important differences as they are designed on different logics and in order to address and solve different types of problems (while the water governance design to a large extent is ecosystem-based and aims at achieving good water quality; the wildlife governance design builds on social representation through stakeholder involvement and aims to build legitimacy in a conflict-ridden policy area). We therefore suggest that the systems for water- and wildlife management in Sweden are a good point of departure for a comparative study where the refined conceptual framework presented here can be applied and the hypotheses tested. In a forthcoming study, we will combine literature studies and qualitative text analysis of official
policy documents with a web-survey addressed to subsystem actors on all levels (within Sweden) and semi-structured interviews with key actors in order to outline the defining features of different adaptive multi-level governance designs in Swedish water- and wildlife management and test the hypotheses on the relationship between institutional design and governance outcome. Given that we now see a trend towards new institutional arrangements for adaptive governance, the need for addressing these issues in a refined way is highly relevant. Can these arrangements be expected to contribute to solving the problems they set out to solve?

References


