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"Governing Ecosystem Services: Framing, processes, and underlying rationales"

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## **Governance of Ecosystem Services: Approaches for designing and adapting sustainable institutions**

### **Abstract**

This paper draws on recent insights on policy processes and governance innovations, demonstrating that designing institutions is a deeply political process far beyond efficiency considerations. We start with the observation that the search for new pathways to sustainable ecosystem services (ES) provisioning and biodiversity conservation is closely related to the search for innovative governance solutions and institutional designs. Following a neo-institutional and policy sciences understanding, institutions are defined as constellations of rights, rules, and relationships that guide social practices and interactions among those who participate in them (Young and Underdal 1997). Policy instruments are one form of formal institutions that coordinate the ways in which actors behave; privileging certain interests and excluding others; setting possibilities and constraints, and driving certain representations of problems forward (Lascoumes and Le Gales 2007). In this regard, new policies and coordination mechanisms have been articulated in the past decade to reshape the governance of ES and biodiversity. These employ market-oriented policies and methods to commodify nature (Adger et al. 2003; Scherr et al. 2004), as well as the creation of new networks and alliances, public private partnerships and community-based governance approaches. Proponents argue that these new modes of governance are better able to deal with today's global ecological problems, reduce regulatory costs, mobilize private capital, harmonize regulatory frameworks, and increase awareness by enlisting a range of new actors in the policy process (Haddad 1997; Jordan et al. 2003, 2005; Mead 2008; Tommel and Verdun 2008). However, questions as to whether these market-based and collaborative policy and governance solutions have actually led to a more sustainable provision of ES and biodiversity remains largely unanswered. The impacts of policies are often unknown; similarly, the effects of policy instrument mixes.

As pointed out in the respective ecological economic literature vast uncertainty exists if such new governance approaches and in particular market-oriented policy instruments hold their promise to fulfill intended objectives in terms of environmental effectiveness, economic efficiency as well as social distributional and procedural equity. Valid empirical information on baseline comparisons and long-term studies are largely missing (e.g. Miteva et al. 2012; Porras et al. 2011; Vatn et al. 2011).

Moreover, the capacity of market-oriented policy solutions to deal with environmental degradation is viewed with skepticism, not to mention their capacity to equitably distribute economic and social benefits (Corbera et al. 2007). As an effect, reactions of non-acceptance and compliance with policy measures are encountered as well as further unintended side-effects which force actors in charge of the implementation processes to take actions of corrections, adaptations, and for policy acceptations which are often costly and difficult to realize ex-post (e.g. Aligica 2005; Esty et al. 2005; Mann and Absher 2014).

It remains an under researched problem for both, social-ecological research as well as policy practice, that such institutional design processes themselves, often implicitly, bear a political dimension that is influencing the definition of policy problems and the design and choice of matching policy solutions. Both the needs to halt biodiversity loss and the provision of ES and its guiding institutions are subject to interpretation and of social construction (e.g. Hagedorn 2002; Lascoumes and Le Gales 2007; Paavola et al. 2009). Hence policy instrument design and choice is a deeply political process where actors negotiate policy strategies and instruments as a matter of interests, positions, and preferences (e.g. Hood 2007; Lascoumes and Le Gales 2007; Voß 2007). The political nature of most controversies on how to conceptualize, organize, and implement nature related institutions suggests that there is no objectively right or wrong design decision to be made. Any decision will be political in that it favors one approach and rules out others. Therefore, in a multi-agency context, sustainable transformation and governance of socio-ecological systems for biodiversity conservation and ES thus require extensive information from those actors concerned and their values, of interpretations of problems and solutions, and struggles over needs and demands on different governance levels.

On an analytical dimension, this paper argues that in order to successfully design future institutions and new forms of governance for ES and biodiversity conservation, better insights on the processes of emergence, development and use of economic policy instruments and governance approaches are needed. This includes the identification of decisive socio-ecological, cultural and institutional factors for policy design and use, and moreover, a careful assessment of actors' interests, motives, expectations, promises and conflicts. The paper draws on different case studies that focus on what shapes policy discourses and policy decision-making processes and identifies influencing factors. A particular focus is on the political aspects of policy development, i.e. negotiations about trade-offs for policy design. Especially the interests that different stakeholders bring into policy processes on different levels and the struggles over needs and demands for policy formulation are highlighted. Such an analysis of the political negotiation processes bring up the often implicit value judgments and trade-offs by disclosing the positions of actors that have and have not been considered in the policy process. Overarching the analysis is the idea that negotiation of policy design is taking place as an interactive modulation process where actors and context conditions mutually shape each other in terms of social-ecological adaptation. These insights, together with the use of participatory policy approaches then form the basis that allow to design more informed and reflexive, hence sustainable institutions.

On a practical dimension targeting the science-policy interface, we deepen the idea that institutional design needs to become a matter of open contestation and discussion. As a step forward, we describe methodological concepts and approaches for how to possibly deal with the challenges of uncertainty, diversity and reconcile conflict among actors who differ in values, interests, and power for improving future institutional design processes. In this sense, bridges have to be offered for a range of perspectives which seek to open innovation processes to related societal concerns to bring

about sustainable improvement. Such participatory (policy) innovation approaches have long been discussed in the area of technology assessment which serves as a conceptual orientation (Rip and te Kulve 2008; Rip et al. 1995; Robinson 2010; Schot and Rip 1997). Practically, for policy development, this comes down to an involvement of actors from beyond the policy networks, who are concerned with the development of conservation and other nature-related policies, as well as actors who voice a critical perspective on the policy project (Garud and Ahlstrom 1997). Ideally organized as a continuous process, open fora, which bring actors together, discuss a range of future projections of policy instrument developments and potential impacts. These fora serve as bridging events and have the objective to create awareness of potential opportunities and challenges at different stages of policy development, to stimulate coordination and responsiveness between policy-makers and policy-takers. This is at the core of what responsible innovation requires, that innovation processes become more transparent, interactive, and responsive (Von Schomberg 2011). Opening institutional design for debate and contestation to negotiate the different interests and increase their societal embeddedness, institutional interplay and contextual sensitivity is, so far a blank spot in the policy practice on ecosystem services provision and conservation of biodiversity.

### **Summary**

Policy instrument design and implementation is as much a political as a technical issue, a matter of concern and judgment, fact and functionality. Drawing on a gap of empirical information on the political dimension of policy processes, this paper presents insights in policy practice as well as ideas and applications of participatory approaches to improve institutional design and its adaptation to socio-ecological systems. The influence of actors' interests, networks, struggles over power, needs and demands on policy design and choice are empirically demonstrated. The political and societal implications for the future development of institutions for ES provision and biodiversity conservation are discussed and the chances and limitations for using participatory policy design and assessment approaches are highlighted. Ideally, these insights feed back into the practice of policy design and development. More robust and socially embedded policy solutions and institutions are the desired result of the analytical insights and methodological suggestions.

**Keywords:** Political negotiations, policy design processes, multiple perspectives, participatory approaches, constructive policy assessment

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