Adjusting policy to institutional, cultural and biophysical context conditions: The case of conservation banking in California

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ABSTRACT

This paper examines the political construction of a policy instrument for matching particular institutional, biophysical and cultural context conditions in a social–ecological system, using the case of conservation banking in California as an example. The guiding research question is: How is policy design negotiated between various actors on its way from early formulation of ideas and principles to an accepted policy solution on a state or national level? The underlying assumption is that in order for a policy instrument to be implemented, it has to be adjusted to various context conditions. That is, it has to become accepted by affected actors associated with the institutional framework, and it has to gain local validity for implementation by actors related to a particular ecological and cultural context. We assume that ideas about policy adjustments are not only functionalistic questions determined for example by the materiality of the resource it governs, but are constructed and politically negotiated because these ideas may differ among the mental models of the associated actors. These actors are stakeholders affiliated with the policy process, i.e. authorities, public and private organizations, interest groups, firms or think tanks dealing with, or being shaped by, the policy at different stages of its development.

As a result certain context conditions and related concerns such as institutional interplay or match to ecological particularities become inscribed in policy design as an outcome of power struggles, values, and interests. These in turn may vary at different stages of policy development and implementation. Each time the instrument is transferred in a new setting it is likely that the incipient policy design may be opened-up and begin a mutual adjustment process among the newly concerned actors. Thus, such policy developments are not immutable but are dynamic. In this paper, the creation of fit for policies on conservation banking to the issue of species protection in the State of California and later to the U.S. environmental governance domain, are analyzed to understand the instrument's emergence and development toward an established policy solution. The focus is on the negotiation processes among the enrolled actors and their strategies for matching the instrument to certain institutional, cultural and ecological context conditions on different scales. Changes in policy design, its underlying influences, actors' interests, conflicts and perceived effects are identified, respectively.

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Introduction

In environmental governance new policy instruments and approaches such as tradable permits have gained increasing political importance for climate and biodiversity protection in the past decades. Pushed by global groups of experts through international processes like the Business and Biodiversity Offsets Program (BBOP) or the Economics of Ecosystems and Biodiversity (TEEB) initiative, their scope of application has been continuously extended. A recent example is the establishment of biodiversity credit trading systems like conservation banking. The basic idea is to quantify measures for biodiversity protection as credits that can be traded on the open market and counted as compensating for biodiversity impacts later. What started first locally in California became an accepted policy instrument for biodiversity protection on a national level. A recently published report on the "State of Biodiversity Markets" identifies 39 existing programs around the world like in the US, Australia, Brazil, or South Africa and another 25 in various stages of development or investigation, for example in the UK and France (Madsen et al., 2010).

The creation of environmental markets such as conservation banking for the trading of species credits is a new form of governance for nature conservation that offers an alternative way for adjusting social behavior which may complete or even substitute for direct interventions by the state (Haddas and Huigen, 1997; Jordan et al., 2003, 2005; Tommel and Verdun, 2008). On the one hand these tradable permit systems promise to reduce costs,

dampen the adversarial nature of regulation, and support economic growth while still achieving regulatory and conservation goals. In addition they are collaborative, enlisting market and civic actors in the design and delivery of such policies, calling for new forms of relationships between state and non-state actors in the process of policy formulation and implementation (Paavola et al., 2009). On the other hand they may have some challenges to overcome, especially with respect to contextual variations from established large-scale, abstract market structures. A number of studies have shown how blue-print approaches failed to sufficiently embrace the diversity of local settings and the complexity of ecosystems, leading to poor natural resources management and environmental degradation (Ostrom, 2007, 2011; see also Galaz et al., 2008; Hagedorn, 2002, 2008). Instead these studies suggest that attention needs to be paid to particular resource system attributes, especially those that provide incentives and guide actions of actors within such diverse governance systems. This problem has been largely taken-up by social–ecological research which seeks to find optimal ways to better match institutions to the ecological contexts they govern (Folke et al., 2007; Galaz et al., 2008; Gibson et al., 2000; Young, 2002, 2008).

Such an understanding of institutions and the assumption that they can be matched or adjusted to particular ecological environments form the starting point for this study on the development of new policy instruments. Designing institutions appears as a matter of functional adjustments to context conditions. Significant questions remain: What is meant by adjusting an institution to particular biophysical or institutional context conditions? What design work is taking place; and what are the tradeoffs between context specificity, e.g. accounting for particular biophysical or cultural requirements on local level, and policy consistency on larger scales, e.g. having a functioning market that matches the broader institutional structure of a regime? We suggest that adding a focus on actors and their understanding of relevant institutional, ecological, socio-cultural and other context conditions as considerations for policy design and performance is helpful in social–ecological research in order to achieve a better understanding of institutional design and adjustment processes. We assert that these adjustments are negotiated and fought out in the process of instrument development. Hence we conclude that for an analysis of institutional and social–ecological fit it is helpful to include references to actors and the possibilities for them to get involved in processes of designing and administrating policies to sustainably manage social–ecological systems.

The goal of this study is to contribute to the literature of institutional policy analysis related to social–ecological systems by analyzing the political construction of a new policy instrument for nature conservation. The focus of the analysis is on the creation of the policy's match to institutional, ecological and cultural context conditions on different scales; from early formulation of ideas in concrete contexts to an accepted policy solution on a state or national level (cf. Hajkowicz, 2009). Actors and organizations, their interests, values, conflicts and power struggles concerning policy design are identified, respectively. Analysing these processes examines the tensions between adaptation needs and specificity of context on the one hand and harmonization needs for reaching common policy objectives on the other, especially across divergent agency or actor's goals (Paavola et al., 2009). Insights may serve to better understand how policy designs are directed toward particular societal demands and ecological requirements for matching social–ecological systems. The questions to be answered are:

(1) Who are the actors involved in negotiating a particular policy design for conservation banking?

(2) What adjustments between conservation banking policy and context conditions are considered important by whom and why?

(3) Which contextual conditions are significant for conservation banking policy design along its development?

This manuscript is structured as follows: in Section "Theory", the conceptual understanding of policy adjustment in social–ecological systems is recapitulated and an analysis framework developed for capturing the political aspects of policy design and development processes. The analysis will focus on the particular concerns of actors and their understanding of adjustment needs which they bring into the policy process. A procedure is then sketched out in Section "Methods" for identifying actors and interests, interactions and interdependencies related to policy design work. An empirical study on the emergence and development of policies for conservation banking is described in Section "Results". It reconstructs the establishment of conservation banking as a policy instrument, and the various processes for its establishment. Ideas and interactions of actors are analyzed as well as their understanding of the instrument's match to context conditions that got inscribed in policy design. Section "Discussion" discusses our insights from policy design negotiations with respect to social–ecological research, and we draw final conclusions in Section "Conclusion".

Theory

To analyze adjustment processes of policies to context conditions, we draw on a comprehensive literature on social–ecological systems (SES) and environmental governance that has developed in recent decades. Since the discourse on the human dimensions of global environmental change started (Young and Underdal, 1997) social systems are seen as being embedded and intricately linked to ecological systems (Anderies et al., 2004; Berkes et al., 1998, 2000; Ostrom, 2005, 2007, 2011). In this perspective, institutions function as an interface between social and ecological systems by regulating resource use, overuse and effects such as pollution (Young, 2002). Hence designing and adjusting institutions stand out as crucial for creating tailored policy solutions to environmental problems.

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 institution with a normative force that guide the ways in which targeted actors are going to behave; privileging certain interests and excluding others; setting possibilities and constraints, and driving certain representations of problems forward (Lascoumes and Le Gales, 2007). Often, formal institutions are supplanted by informal forces, like traditions, habits, identity, and cultural values. Formal and informal institutions together, intentionally or otherwise, influence the behavior of actors in a pertinent context (Paavola et al., 2009). They are seen as persistent features of the political landscape and one of the central factors pushing policy development along specific paths (Collier and Collier, 1991; Pierson, 1993).

The concept of fit between a governance system and an environmental problem as originated by Young (2002, 2008, 2010) offers us a first useful heuristic for analyzing institutional designs and their match to context conditions. Coming out of the tradition of "new institutionalism" (e.g. March, 1989; March and Olsen, 1984; Olson, 1965; Ostrom, 1990; Scott, 2001) it builds on the idea that for institutions to be effective, they must be based on a recognition of the character of environmental problems and feature the introduction of behavioral mechanisms crafted to address these problems. Therefore it is essential to reach agreement on an appropriate structure of rights, rules, and decision-making procedures