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Between markets and hierarchies: The challenge of governing ecosystem services ☆

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ABSTRACT

The spread of the ecosystem services framework has been accompanied by the promotion of market-based policy instruments for environmental governance. In this paper we clarify the rationale, policy goals and governance challenges of the ecosystem services framework. After systematizing the limitations of market-based policy tools for enhancing the provision of ecosystem services, we argue that hybrid regimes are more suitable (compared to pure markets or hierarchies) to deal with the governance challenges derived from the characteristics of ecosystem services, particularly their common good character and their intrinsic complexity. The paper pleads for an alternative conceptual underpinning of market-based instruments, in order to make them more compatible with hybrid forms of governance. We discuss the major implications of such analytical shift.

1. Introduction

Despite inherent problems in measuring natural capital and assigning a monetary value to biological diversity and the services we may derive from it, the promotion and use of 'green markets' have expanded recently, as a policy response to the ecological crisis. The emerging vision that conserving nature enhances human well-being (MA, 2005), helps reduce poverty (Sachs et al., 2009), and promotes resilience in the face of climate change (Chapin et al., 2009) has led to new international initiatives such as the "The Economics of Ecosystems and Biodiversity Report" (Kumar, 2010) and the creation of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). As a result, the interest in market-based policy instruments (such as payments for ecosystem services, carbon or biodiversity offsets, wetlands banking or certification schemes) has spread very quickly. There is considerable debate as to whether these mechanisms amount to a particularly reductionist form of free market fundamentalism, and whether they are causing the unnecessary commoditization of ecosystem services (Gómez-Baggethun and Ruiz-Perez, 2011; Arsel and Buscher, 2012; McAfee, 2012). The latter refers to the incorporation into a trading system of the ecosystem services that hitherto were outside the market domain. It is worth noting, however, that though in a matter of few years market-oriented tools have gained considerable leverage in the environmental policy agenda worldwide, market approaches are still far from being the dominant policy strategies for environmental protection and biodiversity conservation.

In practice, environmental governance is implemented through a wide variety of models and instruments. More often than expected, the management of natural resources depends on a combination of governmental command-and-control, market tools and community-based institutional arrangements. We argue that such hybrid regimes are more suitable (compared to pure markets or hierarchies) to deal with the governance challenges derived from the characteristics of ecosystem services (particularly their common good character and their intrinsic complexity). The paper is structured as follows. The rest of this section clarifies the rationale, policy goals and governance challenges of the ecosystem services framework. Section 2 systematizes the main limitations of market-based policy instruments when they are used to fill the governance gaps arising from the need to manage the provision of ecosystem services. Section 3 calls for an alternative conceptual underpinning of market-based instruments that would allow them to be more compatible with hybrid forms of governance. This is further elaborated in Section 4, which addresses the specific issue of monetary incentives for

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environmental governance. The last section of the paper discusses the major implications of the proposed analytical shift, and puts forward a number of proposals for the governance of ecosystem services.

1.1. The rationale, policy goals and governance challenges of the ecosystem services framework

The use of "ecosystem services" as a key concept for describing the relationship between human societies and the natural environment is historically very recent (Gómez-Baggethun et al., 2010). Since its introduction, the concept has nonetheless spread rapidly and it has become both a heuristic analytical tool for academics and a powerful discursive tool for conservation practitioners and policy-makers interested in the preservation of nature's legacy (Noss and Cooperrider, 1994). The concept is expected to induce a paradigm shift in the management of natural resources (Cowx and Portocarrero-Aya, 2011) and to expand the audience for the conservation message by means of showing the links between natural systems and human well-being (Amsworth et al., 2007; Skroch. and Lopez-Hoffman, 2009). The emphasis put on the economic benefits humans derive from ecosystems and on the role that humans and local social institutions play in both the provision and the degradation of these services is explicitly utilitarian (Gómez-Baggethun and Kelemens, 2008). It stands in stark contrast to the paradigm that previously dominated the field of environmental conservation, with its stress on human/nature dualism, trade-offs between economic development and the conservation of natural ecosystems, and the need to create protected areas free of all human activity (Sunderland et al., 2008). The new framework is expected to facilitate the creation of novel partnerships, particularly between civil society organizations, local dwellers and corporate entities (Tallis et al., 2009) and, therefore, to mobilize additional human and financial resources for the conservation of natural ecosystems. We identify below some key features of the ecosystem services framework and its associated policy agenda.

The ecosystem services framework aims to: (1) acknowledge and communicate the dependency of economic processes on ecosystem functions through quantified measurements, among others; (2) make explicit the linkages between different stakeholders, in particular the users of the resource base (on which the provision of ecosystem services rely) and the beneficiaries of the ecosystem services. In order to achieve these broad objectives, the ecosystem services approach typically "compartmentalizes" ecosystem services following a classification of values (provisioning, regulating, cultural etc.) and the type of contribution made to economic processes (such as carbon sequestration or water regulation). Such classification was consolidated in the Millennium Ecosystem Assessment. It has since been further elaborated by different authors (Wallace, 2007; Costanza, 2008; Fisher and Turner, 2008; Farley and Costanza, 2010). Their varied ways of classifying and compartmentalizing services according to economic uses (with or without market transactions), however, reveal the same utilitarian approach towards the contribution of natural systems to the economy, as well as a primary concern with identifying beneficiaries and potential economic transactions enabled by ecosystem services.

From a policy perspective, the ecosystem services approach is meant to achieve two critical goals: (1) to help solve the tension between economic development and environmental conservation; (2) to influence the decisions made by the users of a resource base, so that they align their practices with the interests of the beneficiaries of ecosystem services. These two goals constitute the core of the governance agenda that comes associated with the ecosystem services approach. This agenda corresponds to two distinctive areas of action, that of (a) creating linkages between different layers and stakeholders in order to deal with complex economic, social and ecological inter-dependencies, and that of (b) inducing changes in the use or the property rights of the resource base that provides the concerned services, so as to align the interests of different social agents.

Although not necessarily inherent to the ecosystem services framework, this governance agenda has come along with two associated measures, (1) the economic valuation of these services, and (2) the promotion—and increasing use—of market-based policy tools, especially the so-called "payments for ecosystem services". The goal is to convert hypothetical (and unrecognized) market values into actual cash flows (Gómez-Baggethun and Ruiz-Perez, 2011). Market-oriented policy approaches are not inevitably linked to the ecosystem services framework. However, two important components of the framework have facilitated the adoption of this type of policy instrument. One the one hand, and given that identification of a tradable "commodity" is a prerequisite for the implementation of market-oriented instruments, the compartmentalization of services has enabled their commoditization. On the other hand, the need to create linkages between various levels and between stakeholders with differing interests has resulted in changes in property or use rights among the users of the resource base.

Panayotou (1993) was one of the first authors to argue systematically that states on their own are not the appropriate agents for environmental decision-making, and that traditional governmental policy-making should leave much more room to self-organization. He argued that government policies, rather than correcting failures in markets for natural resources, tend to add distortions, whether through taxes, subsidies, quotas, regulations, inefficient state enterprises, or public projects with low economic return and high environmental impacts (Panayotou, 1993: 58–59). He added that 'the role of the state in the struggle for sustainable development is critical and fundamental but it is not one of direct management or command and control. The state role is rather to establish new rules of the game and create an environment that fosters competition, efficiency and conservation' (Panayotou, 1993: 144). He therefore called for policy reforms which would ensure that the state would remove the distortions that it had introduced in the first place. The role of the state, as he saw it, should be of creating market conditions for environmental resources and services, which, by not being brought within the present configuration of markets, were being undervalued and depleted.

In principle, monetary transfers seem appropriate tools for both establishing links between social groups and negotiating changes in rights over resources, either through trade or incentives. The promotion and use of market-based policy instruments in the governance of ecosystem services may open new opportunities, but it also entails some threats and challenges, the most important of which we outline below.

2. The challenges of market-based instruments for governing ecosystem services

2.1. The risks of reducing complexity

The compartmentalization and commoditization of ecosystem services involve a substantial reduction of complexity. Characteristically, the application of market-based mechanism requires simple and straight-forward assumptions about the relationship between land use, ecological functions and ecosystem services. Any policy process necessarily entails a reduction of complexity, since political decisions typically require a simplified setting.