

## **SPECIAL PANEL:**

### **The role of economic instruments in the conservation policymix**

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Global biodiversity loss urgently calls for conservation policies at different scales. In most countries, the policies for biodiversity conservation and ecosystem services provision involve a wide range of policy instruments. The use of economic instruments is gaining increasing attention within the adopted policymixes.

This session will focus on case studies developed in the scope of POLICYMIX project. The objective of these studies is to analyse the institutional context and conduct a scientific assessment of the role of selected existing or new economic instruments in policies for biodiversity conservation and sustainable use of forest ecosystem services at national or state levels. Recommendations to improve the design of policymixes and the policy impact are also discussed.

The case studies build on a common conceptual framework for assessing instruments in policy mixes focusing on two aspects: 1) what is the specific or functional role of the relevant instrument in the mix in terms of synergies, conflict or temporal sequencing with other instruments? 2) what is the additional value of the instrument in the policy mix in terms of outcomes? One instrument may increase conservation effectiveness, another save costs, yet another contributes to the acceptability through more distributive fairness, and finally, some may be required due to legal and institutional requirements in a certain socio-cultural setting.

This session will provide an opportunity to discuss methodological issues regarding the assessment of policymixes, as well as empirical results.

The presented case studies will address the following questions:

- What role can economic instruments play in the policymix for biodiversity conservation in the country or state?
- What are the experiences with economic instruments so far?
- How could existing economic instruments be strengthened or new ones introduced?
- What are the potential impacts of such instruments?
- What are the methodological challenges and possible solutions to analyzing interactions between instruments, and comparing instrument roles across national policymix contexts?

The session program will be structured taking into account case study similarities, grouping cases in clusters of similar methodologies and instruments.

**“The role of voluntary forest conservation in the policymix in Norway”**

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**Abstract:**

Attempts to maintain the biodiversity of boreal forest in Norway through a policy of command and control resulted in frequent, and often heated, disputes between private forest owners and environmental authorities during the 1990s. Both the Federation of Norwegian Forest Owners (NFO) and environmental authorities viewed the situation as untenable. A program involving voluntary conservation (VC) was therefore launched by the NFO in 2000 and has since enjoyed wide political support. Under the new program forest owners are compensated for loss of timber values in a similar way as before – the main difference lies in the element of voluntariness. Since 2003, almost all of the new processes for conserving forest on private land have been voluntary. Under this program, more than 500 km<sup>2</sup> of Norwegian forested land has been conserved, of which nearly 200 km<sup>2</sup> is productive forest. Nonetheless, it remains unclear whether VC can replace or simply complement traditional conservation strategies as a means to reach biodiversity conservation goals. While VC is the most important instrument for privately initiated forest biodiversity conservation in Norway, several other economic and regulatory instruments have been or are in use or have recently been introduced under the Norwegian Nature Diversity Act. There are also instruments within other sectors, especially forestry, agriculture and energy, which have impacts the effectiveness of conservation instruments. The paper will analyze the functional role and experiences so far of VC in the conservation policy mix in Norway and discuss its potential synergies and conflicts with other instruments. The analysis will be structured around criteria of outcome effectiveness, cost effectiveness and perceived fairness or social acceptability of the instruments. The analysis takes a national view and is among other sources based on several comprehensive questionnaire surveys of forest owners that share their experiences of both the old and new forest conservation programs. Based on the overall assessment, we discuss potential issues and options for strengthening the VC program and propose key changes that may improve the conservation policy mix.

**Institutional evolution and forest owner perceptions in a policy-mix for voluntary conservation in Finland**

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**Abstract**

Policies addressing biodiversity and ecosystem services are not designed from scratch but they are added onto on a pre-existing institutional basis. As policies are introduced in sequence, their formulation is shaped by the previous experiences. Understanding the evolution of policies requires attention to the formal decisions as well as the perceptions of those actors who design policy and whose behaviour the policy eventually should change.

The combination of an acute need for increasing nature conservation and strong resistance against establishment of conservation areas on privately owned lands in Finland produced innovative experiments on biodiversity conservation in 2002. The payments for nature values were experimented by land-owners as well as practitioners and decision-makers in the pilot phase of a biodiversity program during the following 6 years. Despite the enthusiasm during this pilot phase, the payments for environmental values were not institutionalized as an environmental policy instrument. Instead, they were amalgamated into the pre-existing financing mechanisms with timber market price as the main basis for payment both for the permanent contracts made by the environmental administration and for the temporary grants for valuable habitats under the forest administration. With new policy emphasis on connectivity, nature management and restoration of managed forests, and supply of a range of ecosystem services, there is a need for a broad evaluation of the basis and outcomes of the mix of conservation incentives.

We analyse the evolution of Finnish voluntary forest biodiversity policy instruments by unravelling the institutional constraints of the formal policy and by assessing the influence of these constraints as well as the legitimacy perceptions on the success in recruiting forest owners to contract for conservation. Our paper reports the ex-post analysis of the institutional evolution and forest-owner contracting as well as the consequent setup for an ex-ante assessment of future conservation policy instrument-mixes.

## **“The role of payments for environmental services in the policymix in Costa Rica”**

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### **Abstract:**

**Payments for Environmental Services (PES) and conservation policies.** A PES is an economic instrument that addresses an environmental externality through a variable payment, cash or in-kind. In here, **providers or sellers** of environmental services (public or private) respond to the offer of a payment a service buyer (private company, NGO, local or central government agency) who is distinguishable from the seller. Contracts are voluntary, at least on the supply side, and **conditional** on previously agreed land use that is expected to provide an environmental service. Ideally, payments should be variable and linked to the level of environmental service provided. In the practice other arrangements exist, including in-kind, and one-off payments, at the expense of reduced conditionality.

With limited information about the wide range of economic values associated to biodiversity conservation, PES deals try to cover at least the opportunity cost of land, and prevent forest loss (where this is an alternative, such as in Norway and Finland), or compensate for the cost imposed on the landowner when the law forbids land use changes (such as in Costa Rica and Ecuador). In order to maximise the potential sources of funding, conservation deals try to bundle complementary environmental services, for example biodiversity, protection of carbon stocks, and protection of water quality.

**Actors involved.** *Sellers* of environmental services are those agents who are in a position of safeguarding the provision of environmental services during the contract (or specifically the land-based activities

expected to provide these services). They can be private landholders, informal occupiers of public lands, communal landowners, and NGOs managing protected areas. *Buyers* of environmental services can be direct users (in direct contracts), or grouped under a third party, usually the government or some form of other group like an NGO. *Intermediaries and facilitators* play an important role in these deals: they either manage the schemes or provide ancillary services. A key to equitable PES is the ability to find an intermediary to group small providers, often dispersed, and keep transaction costs low. They include NGOs (international, national and local), donors, government groups, the academic sector, trusts and user associations

**Environmental effectiveness.** Proof of environmental effectiveness in PES is increasingly demanded, although quality studies are not abundant. Effectiveness depends on the baseline used to perform the estimations and on the monitoring system, but also on how the scheme has been defined and whether it ensures additionality, minimizes leakage and permanence. These concepts have been given low priority in the majority of on-going schemes, with a high reliance on 'precautionary principle'. This situation is changing, as funds become scarce either because of excess of supply, and/or because service users rightly demand a show for their buck. Effectiveness in voluntary contracts in some cases is increased by assigning preference criteria (i.e. deforestation-risk areas, or biological-corridors); or making differentiated payments. Increasingly, rigorous impact evaluation studies (i.e. Mexico and Costa Rica) and the use of tools such as optimisation algorithms provide guidelines as to how programs fare and how they can improve their environmental impacts.

**Cost-effectiveness.** Overall, little is known about cost-effectiveness of existing PES schemes, and even less how they compare to other policy instruments. In theory PES should be sleek creatures, where service providers make offers for the contracts based on their own private assessment of opportunity costs. Buyers make payments based on the value of the environmental service, the perceived level of the threat that the ecosystem will change, the perception of how this will affect their reputation, a compulsory fee imposed by a third party (i.e. municipality or national government), or a combination of all of the above. Cost-effectiveness of PES is evaluated based on those opportunity costs, the costs of implementing changes when they are required, and the transaction costs of the program. Costs are correlated to the type of activity subject to payment (i.e. if expensive changes are required), and the possibilities of economies of scale (as opposed to fragmented, small parcels). Start-up costs are very high, and they can include setting up the scheme, baselines, contract negotiation, fundraising, and awareness campaigns. Cutting corners is a common practice, for example, few public consultations and badly done baseline studies, although it may have negative effects in the long-term regarding project uptake.

**Impacts on the poor.** Evidence suggests that PES programs have not been successful in poverty alleviation or in the best of cases have had a mixed effect. PES in particular has a potential to benefit, and harm, poorer households. In the practice, PES tend to benefit a large proportion of wealthier landowners in possession of more and better assets, with access to livelihood options which do not depend on the land, larger properties, better connected and informed, and just as likely (or more) to receive payments if they happen to live in designated social target areas. Transaction costs tend to be fixed for the provider, and the higher the cost the less likely poorer household will enter, and in many developing countries the poorest farmers, indigenous groups without connections, and women have been excluded from project design and implementation. Pitfalls such as these in emerging markets contribute to reinforcing existing power structures, inequities and vulnerabilities. So far, markets for ecosystem services are, in effect, limited in promoting more legitimate forms of decision making and a more equitable distribution of their outcomes in the developing world context. The situation may be different in developed countries (Norway and Finland), where the introduction of voluntary contracts seems to increase legitimacy and sense of justice, as opposed to compulsory conservation.

**Their role in a policy mix.** PES is designed to complement existing legislations regarding the use of ecosystems (i.e. cap and trade), and to help align local malpractices through negotiation between parties where no legislation exists. PES coexists in many places with command-and-control, making prohibitions 'more palatable', for example those evicted from reserves, people living inside or in buffer areas of national parks and reserves who have restricted activities, and increasing self-enforced restrictions by raising the value of the environmental services. By focusing on variable payments, PES has more chances of success than Integrated Conservation Development Projects (ICDPs) and the lessons from attaching social objectives to environmental policies used in ICDPs are valuable material for PES schemes.

Trade-offs are highly likely to occur, whichever instrument is used. However, inconsistencies between practice and theory are responsible for the lack of success PES seems to have had in protecting ecosystems. Some command and control instruments (such as protected areas and/or legislation) must be simultaneously addressed. On the other hand, if poverty reduction is among the goals of the program, authorities must address institutional poverty factors to accompany the project (such as improvements in health, education, and sanitation), which a PES on its own will not be able to address.

### **The challenge of preserving the Atlantic Forest Biome in São Paulo (Brazil): choosing instruments for different contexts**

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#### **Abstract:**

In this context of economic, social and environmental heterogeneities, Sao Paulo State in Brazil faces several challenges of biodiversity and ecosystem services conservation that have to be addressed by all its states and by the Brazilian federal conservation policy mix. This context is the same case as any preservation programmes with multiple objectives that may need multiple instruments. The basic idea behind designing policy mixes is to overcome weaknesses of single instrument policies, such as low ecological effectiveness, high abatement costs (including opportunity and transaction costs) of environmental goal attainment, unjust distribution of environmental burdens or abatement costs among the affected stakeholders or (prohibitively) high transaction costs. In this paper we are aimed at evaluating the importance of considering a mix of policy instruments to address different context and challenges in biodiversity and ecosystem services conservation in the State of Sao Paulo, Brazil, also focusing on conservation on private lands. We start by giving an overview of the biodiversity and ecosystem services conservation context in the Sao Paulo State and the main policy instrument called Forest Code, which is known by its strict direct regulation. Then we elaborate a description of two regions in the state that have very different characteristics but face huge challenges of biodiversity and ecosystem conservation. The Cantareira Mantiqueira corridor is internationally recognized as a biodiversity hotspot and is also the watershed responsible for

providing water for the inhabitants in the metropolitan area of Sao Paulo. The other region, Mogi-Pardo Watershed, hosts the most modern agriculture lands of Sao Paulo State, mainly sugar cane, with high opportunity costs and general lack of compliance with the Forest Code. After defining the context and challenges we briefly address the role that two economic instruments could play in the two contexts: Payment for Ecosystem Services (PES) in Cantareira and Trade Development Rights (TDR) in Mogi-Pardo. We finalize discussing the potential of these instruments but also with some warning issues about their implementation that must be taken into account for policymakers.