

Keywords

Norway, NINA, WP9, Challenges, context and gaps, Ecosystem service values, Modelling, Ecosystem service needs, REDD+, Ecological fiscal transfers, Protected area enforcement, PES (public, private)

Main research question

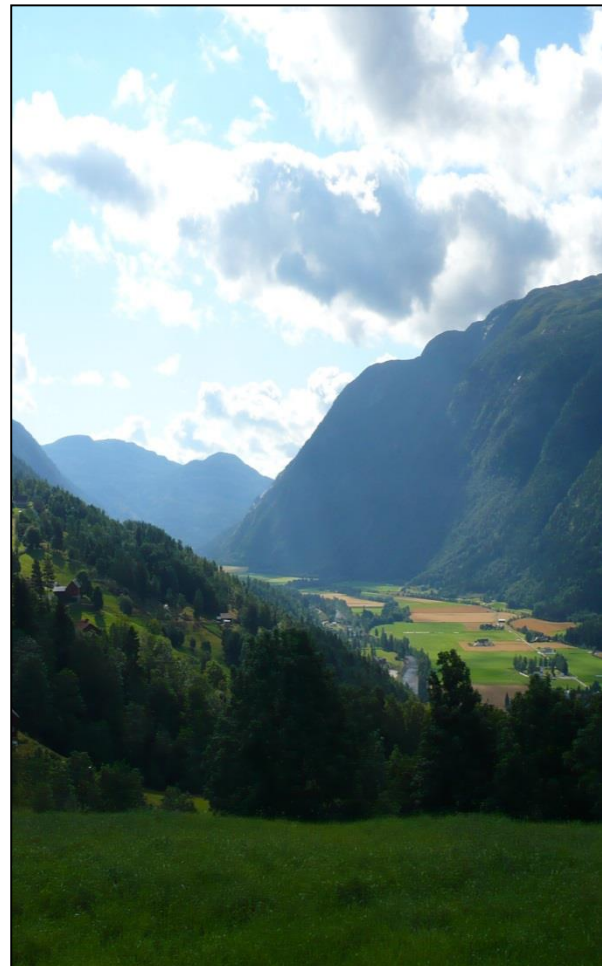
What have we learned from spatial modelling of ecosystem services in support of ecosystem accounting and other policy rationales? How can best practice of ecosystem accounting as a trade-off between accuracy and modelling feasibility be delineated?

Research finding in brief

We analyse the trade-offs between accurately representing spatial heterogeneity of ecosystem services and the practical constraints of modelling ecosystem services based on 29 applied spatial models. We propose that in best practice for ecosystem accounting an approach should be adopted that provides sufficient accuracy at acceptable costs given heterogeneity of the respective service. Furthermore, we suggest that different policy applications require different accuracy and different spatial modelling approaches.

Policymix approach

We propose different overlapping niches for policy rationales which can be supported by spatial ecosystem services models. Niches indicate the reliability range for the respective policy rationales. Ecosystem accounting can potentially support land-use planning or zoning by identifying areas critical for ES provision (priority setting). Ecosystem accounting can also potentially support the targeting of Payment Schemes for ecosystem services (instrument design). Furthermore, ecosystem accounting has its own niche in terms of monitoring changes in ecosystem capital and contributing to a better understanding of the link between ecosystem capital and economic activity.



Reference:

Schröter, M., R. P. Remme, E. Sumarga, D.N. Barton, L. Hein (under review), Lessons learned for spatial modelling of ecosystem services in support of ecosystem accounting. Under review in Ecosystem Services.

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ASSESSING THE ROLE OF ECONOMIC INSTRUMENTS IN POLICYMIXES FOR BIODIVERSITY CONSERVATION AND ECOSYSTEM SERVICES PROVISION



Project objectives

POLICYMIX has developed an integrated evaluation framework for assessing economic instruments that considers multiple policy assessment criteria – biodiversity and ecosystem service provision indicators; valuation of their economic benefit and policy implementation costs; social and distributional impacts; and legal and institutional constraints – at different levels of government.



Methodology

POLICYMIX focuses on the role of economic instruments for biodiversity conservation and ecosystem services provided by forest ecosystems. The cost-effectiveness and benefits of a range of economic versus regulatory instruments are being evaluated in selected POLICYMIX case studies in Norway, Finland, Germany, Portugal, Brazil and Costa Rica. Comparative analysis evaluates the possibilities for transfer of policy success stories between Europe and Latin America, and promoting learning from policy failures.



Training and dissemination

POLICYMIX actively used advisory boards including land users, local managers and national policy-makers, who collaborated with our researchers in the feasibility assessments of economic instruments. A web-based [POLICYMIX TOOL](#) encompassing policy impact assessment guidelines, case stories and demonstrations of policy assessment methods is aimed at supporting dissemination and learning.



Results

POLICYMIX research discusses improvements in the design, targeting and implementation of economic instruments for biodiversity conservation through better understanding of (i) the linkages and complementarities between impact assessment tools, (ii) complementarities between different policy instruments in a policy mix, and (iii) trade-offs in design of a policy mix between economic, environmental and social impact criteria.

EC Contribution:

3 458 312 €

Duration:

2010-2014

Consortium:

9 partners from 8 countries

Project Coordinator:

Norwegian Institute for Nature Research (NINA) (Norway)

Project Web Site:

<http://policymix.nina.no>

Key Words:

Biodiversity, ecosystem services, policy mix, social ecological systems, economic instruments, payments for environmental services, ecological fiscal transfers

Partners:

- Norwegian Institute for Nature Research (NINA), Norway
- Helmholtz Centre for Environmental Research (UFZ), Germany
- Foundation of the Faculty of Sciences and Technology, New University of Lisbon (FFCT-UNL CENSE), Portugal
- Institute for Environmental Studies, Vrije Universiteit Amsterdam (IVM), Netherlands
- International Institute for Environment and Development (IIED), UK
- Finnish Environment Institute (SYKE), Finland
- Rede de Desenvolvimento, Ensino e Sociedade (REDES), Brazil
- Fundação de Apoio a Pesquisa Agrícola (FUNDAG), Brazil
- Tropical Agricultural Research and Higher Education Center (CATIE), Costa Rica

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