Pilot projects and agro---environmental measures in northwest Mato Grosso, Br azil: impacts and lessons for forest frontier “policyscapes”

Published paper

Keywords	Brazil, Mato Grosso, REDES, CATIE, WP5, WP6, Impact evaluation, Biodiversity and ecosystem impact, Social impact, Institutional fit, Implementation process, Outputs, AEM

Main research question

How have integrated conservation and development pilot projects (ICDPs), promoted for biodiversity conservation on family farms in northwest Mato Grosso (NW MT), impacted ecosystem services, socioeconomic conditions and institutional arrangements?

Research finding in brief

Comparison of forest cover dynamics indicated that more forest area was conserved in agrarian reform settlements with sustained exposure to ICDP interventions over a 15-year period. The *Vale do Amanhecer* agrarian reform settlement in the municipality of Juruena retained 57% of forest cover in 2011, in comparison to 35% in the Nova Cotriguaçu settlement in the municipality of Cotriguaçu, and 18% in the Iracema settlement in Juína. In this settlement, environmental licensing and sustainable forest product marketing outcomes supportive of local livelihoods were achieved by integrating social organization with support for material and institutional infrastructure. The particular combination and sequence of ICDP interventions produced synergies between cooperative social organization, state-administered policy instruments and alternative market chains. Considering individual family farms participating in ICDPs across the case study region, agroforestry farm rents were considerably enhanced in comparison to a smallholder farm baseline of mixed beef and dairy.

Policymix approach

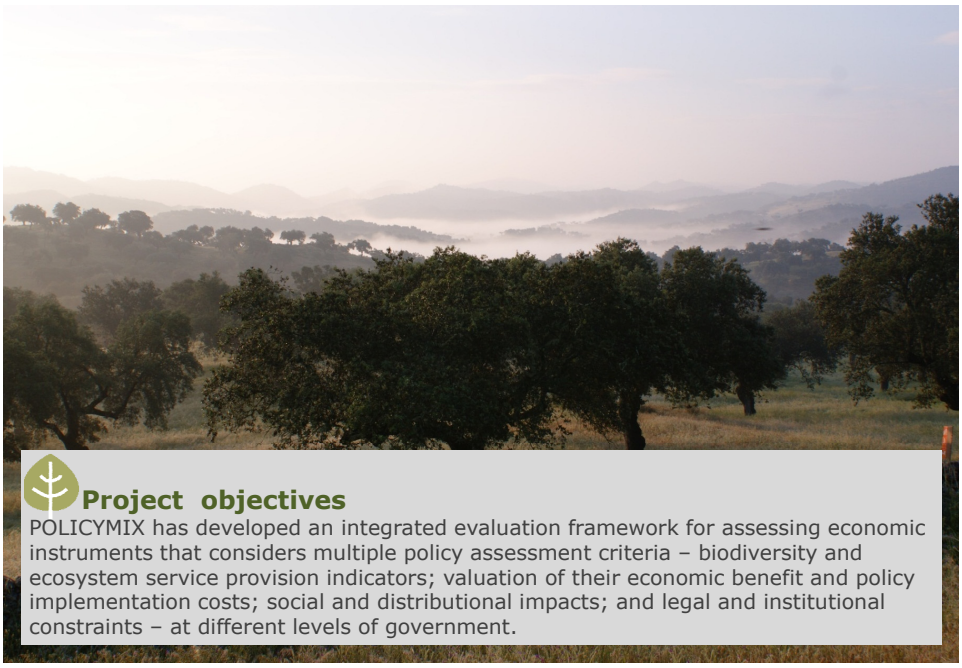
The ICDP approach to biodiversity conservation has been criticized due to a lack of empirical evidence demonstrating ICDP impacts. With attention to such critiques, we determined to conduct an interdisciplinary evaluation of the outcomes of ICDPs and respective Agro---Environmental Measures (AEMs) in NW MT. Our case study evaluated ecological, economic and institutional variables on family farms of between 50---100 hectares in agrarian reform settlements, based in three municipalities (Juína, Juruena, Cotriguaçú) with varying exposure to ICDPs between 1995 and 2010. We performed an ex post analysis of ICDP impacts by assessing: (a) biophysical indicators of land use, carbon stocks, and tree biodiversity in forest and agroforestry plots; (b) the distribution and magnitude of economic gains leading to permanence of the ecological impacts; and (c) the institutional design and social---political context behind the cases, assessed through farmer interviews considering perceptions on institutions and governance.

While for individual participating farms we detected ICDP influences for all three criteria, the specific temporal sequence of ICDP interventions in the Vale do Amanhecer settlement was observed to create critical synergies between the national Brazilian forest code, state administered environmental licensing, product certification, and public and private financing and tax relief for cooperative industries for Brazil nut derived products. In other settlements, the lack of these synergies led farmers to capitulate to dominant economic forces in the region promoting land use change, which practically nullified ICDP demonstration effects at the scale of the landscape. In regions subject to adverse political economic conditions, the viability of REDD+ or other ‘policyscapes’ may be a function of the management of institutional and market synergies, which involve interfaces between formal and informal institutions and the rapid evolution of ‘rules in use’ on forest frontiers.

Reference:
J. Vivan (*in memoriam*), R. Davenport, P.C. Nunes, R. Abad, P.H. May, D.N. Barton, L.P. Amaral. 2013. Pilot projects and agro-environmental measures in northwest Mato Grosso, Brazil: impacts and lesson for REDD+ policy “mixes.” Paper presented at ESEE Conference, Lille.

Contact:
tropnevadr@gmail.com

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 Agricola (FUNDAG), Brazil
- Tropical Agricultural Research and Higher Education Center (CATIE), Costa Rica

Contact:
David N. Barton, coordinator
david.barton@nina.no