At Loggerheads?

Agricultural Expansion, Poverty Reduction, and Environment in the Tropical Forests

A World Bank Policy Research Report
This report is dedicated to the memory of Ricardo Tarifa, who died tragically in an airplane accident in the Amazon forest on September 29, 2006. Ricardo was returning from Manaus, where he had visited and contributed to several major projects focused on conserving the Brazilian Amazon. Ricardo’s life and work exemplifies, in a very practical way, the theme of this book—seeking ways to conserve the forest and better the lives of its people.

Ricardo loved forests and the people that live in them. He felt at home with the communities on the banks of the Tapajós river and those in the Amazonas floodplains. A Yale-trained forest engineer, he moved among distant worlds: the world of forest dwellers, of academe, and of World Bank offices—but his preference was clear. Ricardo loved to work in the field. He believed in the power of local action to promote change, to seek local solutions to global problems. Ricardo, and the contributions he was yet to make, will be missed.
At Loggerheads?

Agricultural Expansion, Poverty Reduction, and Environment in the Tropical Forests

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with
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The World Bank
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Foreword

Three billion people—almost half of humanity—live in rural areas of the developing world, and 1.5 billion of them on less than $2 a day. Forests are important resources for the rural poor, with over 800 million people living in forests and woodlands in the tropics alone. However, global deforestation continues at an alarming rate, with annual losses the size of Portugal, as forests are cleared for agriculture or harvested unsustainably. In addition to the implications for poor populations’ welfare, forest destruction results in the loss of globally irreplaceable biodiversity and contributes to global climate change, which threatens both the rich and poor.

Forests are integral to the Bank’s mission of poverty reduction and commitment to mitigating global environmental problems. The Bank’s forest sector strategy is founded on three mutually reinforcing goals of poverty reduction, economic development, and conservation of forest environmental values. While the Bank is committed to engagement in both forest-rich and forest-poor countries in all forest types, this report focuses on the causes, consequences, and connections of deforestation and forest poverty in the tropical world.

Specifically, the report addresses the potential dilemma of trade-offs between poverty reduction and environmental protection. Deforestation causes environmental damage, but it also increases the supply of farmland and generates rural income and employment, sometimes sustainable and sometimes not. Overall, the report suggests that poverty alleviation and environment are not inherently at loggerheads, nor are they automatically aligned. Outcomes depend on the policies adopted and specific conditions on the ground.

The report proposes a typology for three kinds of forests, which face differential kinds of environmental pressure and offer disparate opportunities for growth and poverty alleviation, to appraise policy
options. It identifies ample opportunities for “win-win” policies. In particular, anything that boosts labor demand outside agriculture will tend to reduce both poverty and deforestation. Additionally, promotion of some kinds of agroforestry can help to improve the ecological functions of degraded forests while boosting farm output and employment.

Resolving many forest issues requires mediation between stakeholders with conflicting claims on forests. Sorting out and defending land and forest tenure is one key policy challenge. Millions of people live with limited or insecure rights to trees and land, unable to tap forest resources and without any motivation to preserve them. Another challenge is recognizing the environmental externalities associated with forest management. Communities at all levels, from local watersheds to the entire planet, need to find ways of rewarding forest owners and managers whose actions benefit others.

These challenges are difficult even for nations with relatively high capacities for governance, yet many tropical-forested nations rank low on governance measures. Nonetheless, the report is cautiously optimistic that these challenges can be tackled. It points to a number of innovations that could tip the balance toward improved governance and thus to deployment of better policies. The rapidly decreasing cost of information is a critical factor in the emergence of these innovations, as it becomes cheaper and easier to monitor forest conditions, communicate with forest populations, and scrutinize the actions of landholders and of government agencies. Together with new institutional mechanisms such as independent forests observers and third-party certification, these innovations can boost transparency in the sector and restrain environmentally and socially destructive resource grabs.

Global finance for forests could accelerate these institutional changes while directly supporting conservation actions and livelihood improvements. While noting the global demand for biodiversity conservation, the report focuses particular attention on the potential opportunities offered by global carbon finance. This is a topic of current and increasingly intense international discussion. About 20 percent of global carbon dioxide emissions come from tropical deforestation. The costs of abating some of these emissions appear low in comparison to other options. International finance for carbon services could defray the direct opportunity costs of forest conservation while also fostering sustainable agricultural and
silvicultural development, which would relieve pressures on protected forests. This is a long-term vision, but it could spur near-term institutional strengthening that would benefit forests and their inhabitants.

The report offers a systematic framework for thinking about how to integrate forest management with rural development in a sustainable way. We hope that this report will help to shape the debate on how best to manage the rural landscape for local and global benefits.

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Abbreviations and Acronyms

ASB  Alternatives to Slash and Burn Project
CIFOR  Center for International Forestry Research
CO$_2$  carbon dioxide
CONABIO  Mexico’s National Biodiversity Commission
EMBRAPA  Brazilian Agricultural Research Corporation
ETS  Emissions Trading Scheme
EU  European Union
FAO  UN Food and Agriculture Organization
FEMA  [state environmental agency of Mato Grosso]
FRA  Forest Resources Assessment
FRA-RSS  Forest Resources Assessment Remote Sensing Survey
FSC  Forest Stewardship Council
GEF  Global Environment Facility
GHGs  greenhouse gases
GPS  Global Positioning System
ICDPs  integrated conservation-development projects
IMF  International Monetary Fund
INPE  Brazilian National Institute of Space Research
ITTO  International Tropical Timber Organization
IUCN  The World Conservation Union
LSMS  Living Standards Measurement Survey
NGOs  nongovernmental organizations
NPV  net present value
RISEMP  Regional Integrated Silvopastoral Ecosystem Management Project
RL  reference level
SLAPR  Rural Property Environmental Licensing System (Mato Grosso)
TREES  Tropical Ecosystem Environment Observation by Satellite
WWF  Worldwide Fund for Nature/World Wildlife Fund

100 ha = 1 km$^2$
1 ton carbon is equivalent to 3.67 tons CO$_2$
Juan Pablo Moreiras / Fauna & Flora International / Comisión Centroamericana de Ambiente y Desarrollo photo archive.