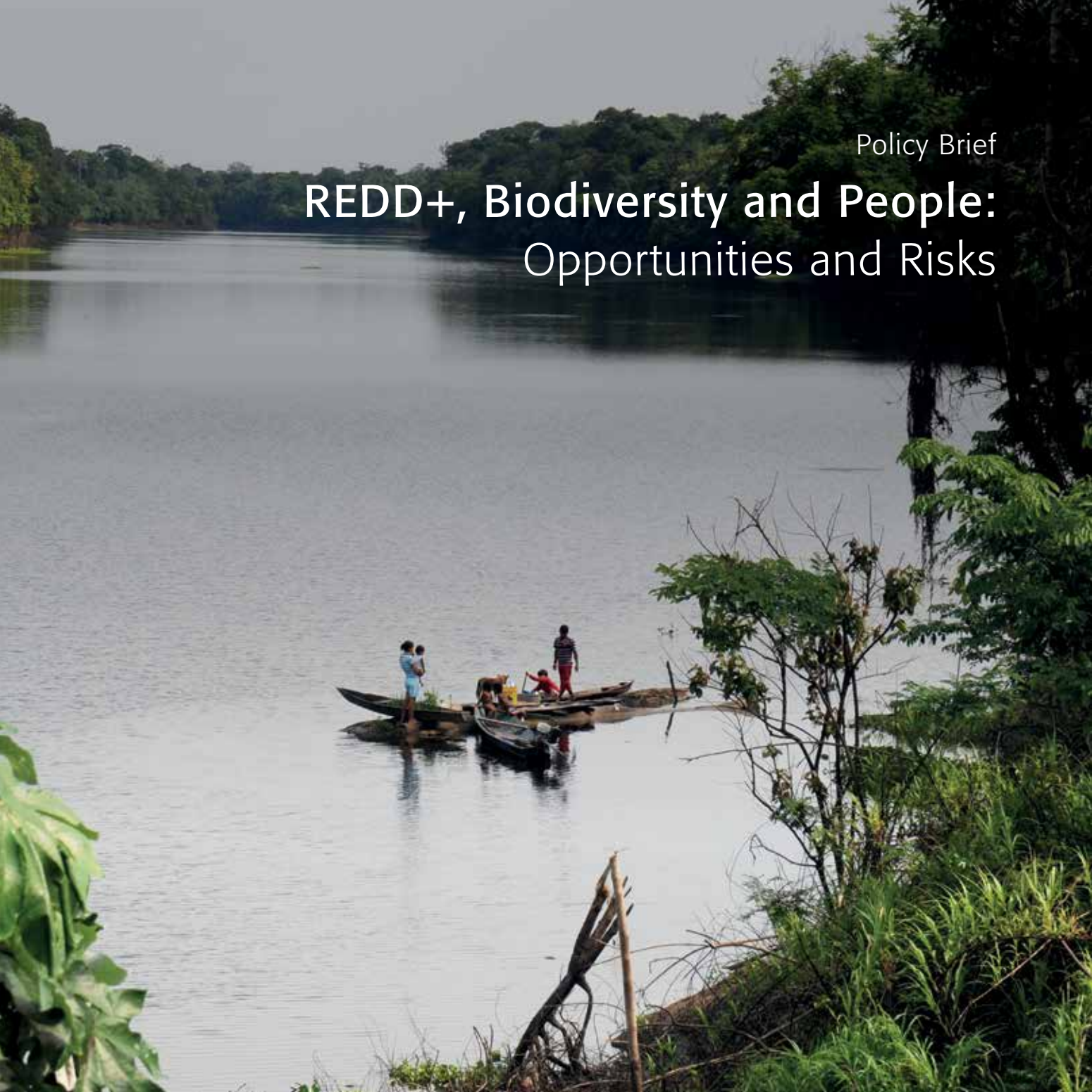

Policy Brief

REDD+, Biodiversity and People: Opportunities and Risks

This publication is based on the report "Understanding Relationships between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives. A Global Assessment Report. Prepared by the Global Forest Expert Panel on Biodiversity, Forest Management and REDD+" published as IUFRO World Series Volume 31.

Editors
John A. Parrotta
Christoph Wildburger
Stephanie Mansourian

Layout
Eugénie Hadinoto

Cover picture
Mamirauá Sustainable Development Reserve –
© P.J. Stephenson

Published by
International Union of Forest Research Organizations

ISBN: 978-3-902762-19-1

Printed by
Eigner Druck
3040 Neulengbach
Austria

Photo: Deramakot Forest Reserve, Sabah, Malaysia – © Michael Kleine

EMBARGOED FOR RELEASE UNTIL 00:01 GM 2012

Contents

Foreword 5

Introduction 6

Key messages 8

Acknowledgements 13

Foreword

*REDD+ (**r**educing greenhouse gas **e**missions from **d**eforestation and forest **d**egradation, and enhancing forest carbon stocks in developing countries) is a proposed mechanism for climate change mitigation evolving in the UNFCCC. It has the potential to realise its primary climate change mitigation objective, with variable impacts, both positive and negative, on biodiversity, forests and people. REDD+ is complex, its proposed activities and implementation mechanisms are not yet clearly defined, and therefore surrounded by uncertainty. For these reasons, a Global Forest Expert Panel on Biodiversity, Forest Management and REDD+ was established by the Collaborative Partnership on Forests in December 2011 to assess the state of knowledge related to REDD+ activities and their implementation.*

The Expert Panel included 24 scientific experts from a variety of biophysical and social sciences disciplines relevant to the topics covered in the assessment report. An additional 18 contributing authors added their expertise to the assessment. The full report and its individual chapters were peer-reviewed by another 16 scientific experts and revised prior to publication. The results of this voluntary collaboration among these experts are presented in the panel's assessment report, entitled "Understanding Relationships between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives".

The report evaluates the implications of forest and land management interventions envisaged under REDD+. It analyses the most current scientific literature that sheds light on the relationships between forest biodiversity and carbon (and other ecosystem services), how these complex relationships may be affected by management activities implemented to achieve REDD+ objectives, the potential synergies and trade-offs between environmental and socio-economic objectives, and their relationship to governance issues. This policy brief summarises the key findings of the full assessment report.

It is my sincere hope that both the full assessment report and this policy brief equip policy-makers, investors, donors and other interested stakeholders with a solid scientific basis for informed decision-making with respect to REDD+ implementation.

Eduardo Rojas-Briales
Chair of the Collaborative Partnership on Forests

EMBARGOED FOR RELEASE UNTIL 00:01 GMT ON 16 NOVEMBER, 2012

Photo: Batwa community next to Bwindi Impenetrable National Park, Uganda – © Adrian Martin

Introduction

Forests, especially those in tropical and sub-tropical regions, harbour most of the world's terrestrial biodiversity and provide a broad range of vital ecosystem services. These services directly benefit people both globally and locally, in particular the hundreds of millions of people whose livelihoods depend, at least in part, on forests. One of these global services – carbon sequestration – is receiving international attention because of forests' important contribution to the global carbon cycle. Indeed, forests can be either sinks or sources of carbon depending on how they are managed.

The continued loss and degradation of forests is compromising the provision of these ecosystem services. Deforestation, resulting mainly from ongoing conversion of forests to agricultural land, is the major cause of global biodiversity loss in terrestrial ecosystems. It is also the second largest anthropogenic source of carbon dioxide emissions to the atmosphere after fossil fuel emissions. Forest degradation (changes in forest condition that affect a forest's capacity to provide goods and services) also accounts for a substantial proportion of global anthropogenic greenhouse gas emissions, and is a significant driver of biodiversity loss.

Today more than ever, the future of the global forest carbon sink – as well as that of the world's terrestrial biodiversity – is highly uncertain. On the one hand, ongoing threats from land-use and environmental change are significant; on the other, there are potentially significant opportunities for positive change through international efforts, such as REDD+, to reduce rates of deforestation and forest degradation. A number of actions, including changes in land use and management practices (in both forested and non-forested land) can achieve REDD+ objectives while also conserving biodiversity and enhancing the provision of other forest ecosystem services.

Selecting the most appropriate approaches for implementing such actions is critical to ensuring the best outcomes for biodiversity, carbon, other ecosystem services, and for people. Given the complexities of forest ecosystems and their management, and their importance for biodiversity conservation and human well-being, poorly designed and implemented REDD+ interventions could have serious adverse impacts on biodiversity and people.

The assessment report produced by the Global Forest Expert Panel on Biodiversity, Forest Management, and REDD+ reviews the current state of knowledge related to the implementation of REDD+ activities and highlights a number of important messages which are summarised in this policy brief. These key messages are intended to support more informed and inclusive decision-making on REDD+.

EMBARGOED FOR RELEASE UNTIL 00:01 GMT ON 16 NOVEMBER, 2012

Photo: Mangrove forest on Marajó Island, Brazil – © Christine B. Schmitt

Key messages

1. Biodiversity is a key determinant of forests' ability to effectively provide ecosystem services, notably carbon sequestration, and to remain resilient in the face of disturbances such as climate change.

Forests are important for biodiversity, but conversely, biodiversity is also fundamental to maintaining critical ecosystem processes in forests, such as photosynthesis and nutrient cycling. Many of these ecosystem processes translate into ecosystem services of benefit to people, such as carbon sequestration. The loss of biodiversity caused by environmental change and forest degradation may negatively affect ecosystem function and reduce the provision of ecosystem services.

To prevent this, forest management should strive to minimise risks of adverse biodiversity impacts, using forest goods and services at levels known to be sustainable for the ecosystem (i.e., within a 'safe operating space').

2. The most immediate and greatest benefits for both carbon and biodiversity are likely to come from actions that reduce deforestation and degradation.

REDD+ actions that seek to maintain existing forest carbon stocks and biodiversity by effectively reducing deforestation and forest degradation are more likely to have greater and more rapid benefits for both carbon and biodiversity compared to actions that seek to restore them. The timing of benefits is likely to differ: actions to avoid deforestation and forest degradation can yield immediate carbon and biodiversity benefits, while those that seek to restore forests generally yield biodiversity benefits more slowly than carbon benefits.

While reducing deforestation and forest degradation will be the management activities with the highest likelihood of achieving synergistic benefits for both biodiversity and carbon, the choice of appropriate management actions will very much depend on the ecological, social, economic and political contexts. Frequently, several management actions will need to be undertaken in parallel.

3. REDD+ actions can have highly variable impacts on carbon and biodiversity, at different spatial and temporal scales.

While REDD+ can provide clear benefits, it is not easy to anticipate or measure all impacts of management actions on carbon and biodiversity. Impacts of REDD+ interventions are likely to vary significantly across different forest types and landscape conditions. These impacts may occur outside the area of management or in the future, and they can also evolve over time. Trade-offs between carbon and biodiversity outcomes can take place both locally and at wider spatial scales. Outcomes will also depend on initial conditions of ecosystems including land-use history.

The trade-offs between carbon and biodiversity need to be addressed in REDD+ planning and implementation to minimise the risk of unintended negative impacts, such as the displacement of forest degradation or deforestation to other areas. Furthermore, caution is needed when extrapolating management recommendations across different ecosystems. No single approach can be necessarily replicated widely; instead strategies to implement REDD+ actions will need to be tailored to specific local and regional settings.

4. Pursuing social objectives alongside REDD+ will also increase the likelihood of achieving carbon and biodiversity goals.

The way in which REDD+ is implemented will determine its social and economic impacts. In most countries in tropical and sub-tropical regions the stakeholders who are most dependent on forests are frequently also the most vulnerable. Although REDD+ may generate substantial positive impacts, it may also lead to changes in resource management and access that will disproportionately affect them.

These socio-economic impacts should be considered early on in REDD+ implementation. The rights and livelihoods of the particular stakeholders need to be taken into account in any management decision related to forests and (changes in) land use. In turn, evidence suggests that the inclusion of socio-economic objectives up front will help ensure local involvement and acceptance, and therefore, increase the likelihood of achieving carbon and biodiversity goals and the sustainability of REDD+ activities.

5. For REDD+ implementation to be effective, tenure and property rights, including rights of access, use and ownership, need to be clear.

Management interventions for implementing REDD+ objectives need to be supported by appropriate governance frameworks that address the rights of forest-dependent stakeholders. Evidence shows that security of tenure, and associated authority for local decision-making, support better environmental management, as well as the realisation of livelihood benefits. Poor recognition of such rights excludes the rural poor from decision-making, and denies them access to potential benefits from market-based interventions, such as forest certification, payments for ecosystem services (PES) and REDD+. Weak tenure security also facilitates 'land grabbing' and other irregularities related to land ownership and transfer, which typically result in expropriation of lands from the most vulnerable groups. Clarifying and securing these rights is therefore critical to the sustainability of REDD+ activities.

6. An integrated landscape management approach provides a useful tool to reconcile environmental, social and economic considerations relevant to REDD+.

REDD+ interventions – even if site-based – will have impacts beyond their immediate surroundings. For this reason planning and implementing REDD+ within a landscape provides the means to adequately assess land use scenarios with REDD+ actions, and their likely impacts on stakeholders. An integrated landscape management approach also helps to define and address resulting trade-offs and to ensure that the interests of the most vulnerable groups are adequately taken into account. Such an approach therefore enhances the likelihood of achieving carbon and biodiversity goals.

7. There is a tension between national REDD+ efforts aimed at international standardisation, the strengthening of national sovereignty, and efforts to empower local communities as key actors in REDD+.

Efforts to promote REDD+ safeguarding at the international level may either complement or constrain national sovereignty and local autonomy. Without sufficient emphasis on local participation, REDD+ policies and measures – for example, national targets to expand protected areas or increased regulatory enforcement – could reverse local empowerment and undermine effective community-based forest governance.

REDD+ policies and governance should embrace existing initiatives and governance arrangements that are already working and should aim to balance conflicting demands for international standardisation, national sovereignty, decentralisation and the empowerment of local communities.

8. Understanding the relationship between biodiversity, carbon forests and people is the key to achieving REDD+ objectives.

A thorough understanding of the relationships between biodiversity, carbon and other forest ecosystem services and how these impact on, and relate to, people is essential to inform appropriate management actions. It is also of crucial importance that any intervention be considered within the governance context and related constraints of a given region.

However, knowledge gaps remain on topics of relevance to the implementation of REDD+. Such gaps relate for example to the different biodiversity impacts of management actions in different forest types, the level of ecosystem services provided by secondary forests, decision support tools to assess the range of social and economic impacts of forest management decisions and means to incorporate the interests of diverse stakeholders in such decisions, to cite but a few.

Overcoming these gaps is critical to ensuring that decision-makers and other stakeholders are fully equipped with accurate, scientifically-grounded information to take informed decisions. Knowledge gaps on the various aspects of REDD+ should be addressed as a matter of priority for effective implementation of REDD+ and related forest management interventions.

Acknowledgements

This publication is based on the report "Understanding Relationships between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives. A Global Assessment Report. Prepared by the Global Forest Expert Panel on Biodiversity, Forest Management and REDD+" published as IUFRO World Series Volume 31. We express our sincere gratitude to all its authors: Toby Gardner, Valerie Kapos, Werner A. Kurz, Constance L. McDermott, Bernardo B.N. Strassburg, Ian D. Thompson and Bhaskar Vira (coordinating lead authors); Samuel Assembe Mvondo, Joice Ferreira, Manuel Guariguata, Markku Kanninen, Sango Mahanty, Adrian Martin, Kimiko Okabe, Yude Pan, Lian Pin Koh, Nophea Sasaki, Christine B. Schmitt, Charlotte Streck, Jason Tylianakis and Harro van Asselt (lead authors); Jos Barlow, Neil M. Dawson, Amy E. Duchelle, Simone Frick, Nicole Gross-Camp, Constanze Haug, David Humphreys, Agnieszka Latawiec, Marco Lentini, Hansaran Luintel, Mari Mulyani, Cleber Salimon, Chandra Shekhar Silori, Mark D. Spalding, Regan Suzuki, Luke Swainson, Nathalie van Vliet and Feriborz Zelli (contributing authors).

We also gratefully acknowledge the generous financial and in-kind support provided by the Ministry for Foreign Affairs of Finland, the United States Forest Service, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety as part of its International Climate Initiative, through the Netherlands Development Organization SNV. The views expressed within this publication do not necessarily reflect of the organisations supporting this work.

Furthermore, we would like to thank member organisations of the Collaborative Partnership on Forests for providing overall guidance and generous in-kind support.

We are particularly grateful also to the Food and Agriculture Organization of the United Nations (FAO), the Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BFW, Vienna) and to Embrapa Amazonia Oriental (Belém, Brazil) for hosting Expert Panel meetings. Our special thanks go to the team of the IUFRO Secretariat for providing indispensable administrative and technical support to the work of the Panel and to the editors of this policy brief.

A short publication such as this cannot do justice to all the complexities and controversies related to the linkages between biodiversity, carbon and forest management in the context of REDD+. For a more comprehensive assessment, the reader is directed to the Panel's full report.

Nevertheless, the central thread running through both the full report and this policy brief is the complexity of the issues that must be addressed in successfully implementing REDD+ activities while at the same time achieving both biodiversity conservation objectives and meeting

EMBARGOED FOR RELEASE UNTIL 00:01 GMT ON 16 NOVEMBER, 2012

Photo: Participation in social impact monitoring, REDD+ pilot project, Kilwa, Tanzania – © Adrian Martin

human needs. It is our sincere hope that the policy brief may effectively assist policy- and decision-makers in tackling the challenges of shaping and implementing REDD+ in the future.

John Parrotta
Christoph Wildburger
Stephanie Mansourian

EMBAR 00:01 GMT ON 16 NOVEMBER, 2012

Photo left: Black howler monkey – © P.J. Stephenson | Photo right: Fodder collection in Melghat Tiger Reserve, India – © John A. Parrotta

EMBARGOED FOR RELEASE UNTIL 00:01 GMT ON 16 NOVEMBER, 2012

GFEP donors:

In accordance with the provisions of the GFEP Concept Note
the following CPF members support this publication:

EMBARGOED FOR RELEASE UNTIL 00:01 GMT ON 16 NOVEMBER, 2012

IUFRO