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A REVIEW OF THE BIODIVERSITY GOALS AND PROPOSED MONITORING METHODS IN NATIONAL REDD+ PROGRAMS

FOREST CARBON, MARKETS AND COMMUNITIES (FCMC) PROGRAM

APRIL 2014

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The US Agency for International Development (USAID) has launched the Forest Carbon, Markets and Communities (FCMC) Program to provide its missions, partner governments, local and international stakeholders with assistance in developing and implementing REDD+ initiatives. FCMC services include analysis, evaluation, tools and guidance for program design support; training materials; and meeting and workshop development and facilitation that support US Government contributions to international REDD+ architecture.

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

BeRT	Benefits and Reductions Tool
CBD	Convention on Biological Diversity
DRC	Democratic Republic of the Congo
ER-PIN	Emissions Reduction Program Idea Note
ESMF	Environmental and Social Management Framework
FCPF	Forest Carbon Partnership Facility
MRV	Measurement, Reporting and Verification
NBSAPs	National Biodiversity Strategies and Action Plans
NGOs	Non-governmental organizations
NPD	National Program Documemt
OPs	World Bank Operational Procedures
R-PP	Readiness Preparation Proposal
REDD+	Reducing emissions from deforestation and forest degradation, plus the role of conservation, sustainable forest management and the enhancement of forest carbon stocks
REDD+ SES	REDD+ Social and Environmental Standards Initiative
SEPC	Social and Environmental Principles and Criteria
SESA	Strategic Environmental and Social Assessment
UN-REDD	United Nations REDD+ Programme
UNEP-WCMC	United Nations Environment Programme – World Conservation Monitoring Centre
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Tropical deforestation and forest degradation are simultaneously a major source of greenhouse gas emissions and a leading contributor to the loss of biodiversity. Slowing deforestation and forest degradation along with forest conservation and enhancement could therefore have major benefits for the climate and biodiversity. The REDD+[1] mechanism that is being designed under the United Nations Framework Convention on Climate Change (UNFCCC) is primarily aimed at the climate implications of forests. However, countries must also meet REDD+ safeguards which include provisions related to the conservation of biodiversity and the enhancement of other environmental benefits.

This study reviewed publicly available documents developed by 15 countries as part of their preparations for REDD+. These documents included the Readiness Preparation Proposal (R-PP) for the Forest Carbon Partnership Facility (FCPF), the UN-REDD National Programme Document (NPD), Emissions Reductions Program Idea Note (ER-PIN) for the FCPF, and National REDD+ Strategy. There are important potential synergies between REDD+ and the commitments that countries have made to the Convention on Biological Diversity (CBD), and the country's most recent National Biodiversity Strategy and Action Plan (NBSAP) and National Reports to the CBD were also reviewed to identify ways in which countries can coordinate their REDD+ and national biodiversity programs.

The results of this review show that 7 of the 15 countries indicated that biodiversity conservation is an important objective of their REDD+ program, while all indicated that their REDD+ program will meet UNFCCC safeguards requirements. Consistent with their preliminary nature, none of the R-PP's and NPD's presented detailed descriptions of the types of biodiversity benefits that they expect to achieve through REDD+. The ER-PINs provided a more detailed description of how a country may implement REDD+ and included more precise biodiversity goals, including the conservation of particular threatened species (Democratic Republic of the Congo - DRC), and the effective expansion of protected areas through the conservation of forests in buffer zones adjacent to national parks (Costa Rica).

None of the R-PPs or NPDs described specific policies or measures that countries expect to use to conserve biodiversity through REDD+. However, spatial planning exercises to understand the distribution of carbon stocks, biodiversity, and threats to forests have been undertaken in at least seven of the countries, many with support from UN-REDD. These studies were often done concurrently with the R-PPs and the results may therefore not have been available for inclusion in the R-PPs. Future national REDD+ strategies or ER-PINs may include more detailed information about the policies and measures that countries plan to implement to conserve biodiversity through REDD+. The two countries with ER-PINs did describe biodiversity-specific measures, including the prioritization of under-represented habitats in the national parks system (Costa Rica), and a range of activities designed to reduce illegal hunting (DRC).

Despite important potential synergies between REDD+ and the CBD, only eight of the countries mentioned their commitments to the CBD in their R-PP or NPD, and only five mentioned climate change mitigation activities in their NBSAP. However, only two of the NBSAPs from the reviewed countries were written since the countries began their REDD+ preparations. The two countries with recently revised NBSAPs (Colombia

[1] Reduced Emissions from Deforestation and Forest Degradation, plus conservation, the sustainable management of forests and the enhancement of forest carbon stocks

and Vietnam) did include references to the role of forests for carbon storage and in the case of Vietnam, the NBSAP indicated plans to integrate biodiversity conservation into the REDD+ program.

To demonstrate that the UNFCCC REDD+ safeguards are being addressed and respected, countries will need to implement monitoring activities for REDD+, and there may be ways to combine this monitoring with efforts to measure the achievement of CBD objectives. However, none of the reviewed REDD+ documents presents details about biodiversity monitoring, and only one (Guatemala) referred to monitoring done for CBD commitments. Several others indicated that biodiversity monitoring will build on other existing monitoring initiatives.

All of the countries reviewed for this study are beginning to initiate REDD+ implementation at the sub-national scale. This presents an opportunity to test approaches to various aspects of REDD+ before they are implemented nationally. Sub-national implementation could be used to prioritize REDD+ activities in areas with the highest biodiversity value, and to build a monitoring system that combines data at different scales, such as data from ground surveys with national-scale remote sensing data. Systems for integrating data at different scales will need to be designed, but none of the documents reviewed described a process for doing this.

The documents reviewed for this study are preliminary descriptions of the REDD+ programs. While some described an important role for biodiversity conservation through REDD+, none provided sufficient detail to assess the likely impacts of the REDD+ programs on biodiversity. As countries progress with the development of more detailed REDD+ strategies, there is an important need to include specific biodiversity objectives and to describe the policies and measures that will be used to achieve these goals, as well as the monitoring methods that will be used to measure biodiversity impacts. There are clear potential synergies between REDD+ and five of the Aichi Targets that countries have committed to achieve under the CBD, and countries should ensure close coordination between the government units responsible for REDD+ and the CBD. These steps will help ensure that the biodiversity benefits of REDD+ can be achieved, and the risks can be mitigated.

1.0 INTRODUCTION

Tropical deforestation and forest degradation are simultaneously a major source of greenhouse gas emissions and a leading contributor to the loss of biodiversity. Slowing deforestation and degradation could therefore have major benefits for climate and also for biodiversity. REDD+[2] is being designed under the United Nations Framework Convention on Climate Change (UNFCCC) to address the climate implications of forest loss. However, the potential biodiversity benefits of REDD+ are widely recognized, and the success of REDD+ will be measured in part by its biodiversity impacts.

The biodiversity implications of REDD+ have been discussed extensively (Christophersen 2010, Parrotta *et al.* 2012). Many conservationists support REDD+ because of its potential to incentivize the protection and restoration of forests and countries have formally acknowledged the potential synergies between REDD+ and the Convention on Biological Diversity's (CBD) Aichi Targets (CBD 2010). REDD+ could benefit biodiversity conservation by ensuring that large areas of forest are protected or sustainably managed, reducing existing drivers of deforestation. In some cases, it could also enhance the connectivity of forest cover across key altitudinal gradients or biological corridors, facilitating animal movement (Harvey *et al.* 2010, CBD 2011). REDD+ could also benefit biodiversity conservation by helping to address forest governance issues, such as illegal logging, the accountability of forest agencies, and recognition of indigenous peoples rights (CBD 2011).

A number of risks to biodiversity from REDD+ have also been recognized. A leading concern is that REDD+ could to divert the pressure on forests that have large carbon stocks to other ecosystems that are lower in carbon but that have high biodiversity value, such as some savannas or grasslands. Another perceived risk is that REDD+ could provide incentives to convert low carbon density natural forests to higher carbon density plantations that might quickly sequester more carbon, but would have low biodiversity value.

In response to these opportunities and risks of REDD+ strategies, countries agreed to include biodiversity considerations in the UNFCCC's REDD+ safeguards that were adopted as part of the Cancun Agreements (UNFCCC 2010). These safeguards call for REDD+ programs to incentivize the protection and conservation of natural forests and require that REDD+ activities do not lead to the conversion of natural forest. Countries also agreed to develop systems for providing information on how the safeguards are being addressed and respected and, as appropriate, to build upon existing systems (UNFCCC 2011). The UNFCCC safeguards and associated guidelines are not detailed, however, and permit substantial flexibility in the way that countries may treat biodiversity conservation through REDD+.

1.1 OBJECTIVES

Countries are still in the design phase of their REDD+ programs and the long term impacts of REDD+ on biodiversity will not be known for years or decades. However, early indications of how countries are planning to address biodiversity are important for identifying opportunities to promote practices that will result in improved outcomes for biodiversity. This study reviews documents developed early in the REDD+ readiness process to explore how emerging national-level REDD+ programs are addressing biodiversity issues. The review focused on the following key questions:

[2] Reduced Emissions from Deforestation and Forest Degradation, plus conservation, the sustainable management of forests and the enhancement of forest carbon stocks

1. What types of biodiversity benefits do national REDD+ programs seek to provide?
2. What policies and measures do countries plan to use to generate biodiversity benefits?
3. Do national REDD+ programs link to other national biodiversity objectives (e.g., National Biodiversity Strategies and Action Plans (NBSAPs) that are developed for the CBD, and conversely, do the national biodiversity documents indicate coordination with the REDD+ program?
4. Are biodiversity monitoring methods described for the REDD+ program, and are these coordinated with NBSAP or other national monitoring programs?
5. Do countries plan to use sub-national REDD+ initiatives to contribute to national biodiversity goals and monitoring?

This review is based on documents that countries developed during the initial stages of their "REDD+ readiness[3]" preparations. Most of the documents were developed for participation in the two leading international initiatives that support REDD+ preparations, the Forest Carbon Partnership Facility (FCPF) and the United Nations REDD+ Programme (UN-REDD). These initiatives are providing technical and financial support designed to build the human and institutional capacities needed for all aspects of REDD+, including biodiversity (as a component of REDD+ safeguards).

Each of the countries participating in the FCPF has developed a Readiness Preparation Proposal (R-PP) that describes the approach that the country will take in developing a national REDD+ strategy that includes social and environmental safeguards. The R-PP is a planning and budgeting document that the FCPF uses to allocate funding for the development of a detailed REDD+ strategy. As countries advance in their preparation for REDD+, they may also develop an Emissions Reductions Program Idea Note (ER-PIN) as part of the process for obtaining compensation for emissions reductions from the FCPF Carbon Fund. The ER-PIN provides a more detailed description of the actions that a country will take to implement REDD+ than is described in the R-PP.

Countries participating in the UN-REDD program develop a national program document (NPD) that, similar to the R-PP, describes the initial plans that a country has for its REDD+ program. Both the R-PP and NPD include a list of the activities (e.g., stakeholder engagement, the design of safeguards systems, Measurement, Reporting and Verification [MRV] capacity, and a national reference level) and budget required for the development of a national REDD+ program.

The approaches that countries take towards biodiversity conservation in their REDD+ program are influenced by a mix of requirements and guidance that includes the UNFCCC safeguards decisions, FCPF and UN-REDD policies, and external guidance. For example, FCPF countries are subject to the World Bank's safeguards requirements because the FCPF is administered through the World Bank. The FCPF promotes an approach designed to help countries meet the World Bank safeguards (Operational Policies, or OPs) that are mandatory for all World Bank funded projects, and simultaneously address the UNFCCC safeguards. This process includes a Strategic Social and Environmental Assessment (SESA) followed by an Environmental and Social Management Framework (ESMF). The SESA is applied to integrate social and environmental considerations (and OP compliance) into the design of a country's REDD+ strategy. The ESMF is then developed to guide management of social and environmental issues during the implementation of the strategy. The application of the ESMF leads to development of specific environmental management plans for how negative environmental impacts of the REDD+ program will be managed once site-specific

[3] UNFCCC Cancun Decision (1/CP.16) requests that countries develop a national strategy or action plan for REDD+, a national forest reference emission level/reference level, a national forest monitoring system, and a system for providing information on how safeguards are being addressed and respected.

activities are defined. The FCPF has also developed a document to explain the linkages between its Operational Policies and the UNFCCC safeguards (FCPF 2013)

UN-REDD has developed its own guidance that is specifically oriented to the UNFCCC safeguards, and may be applied voluntarily by UN-REDD countries. This includes the UN-REDD Social and Environmental Principles and Criteria (SEPC), UN-REDD 2012) were developed as a framework to guide the development of the UN-REDD program and as an optional tool for countries to use in the development of their REDD+ programs. To facilitate the application of the SEPC, UN-REDD developed a draft Excel-based decision support tool that countries may also voluntarily use (Benefits and Risks Tool [BeRT]).

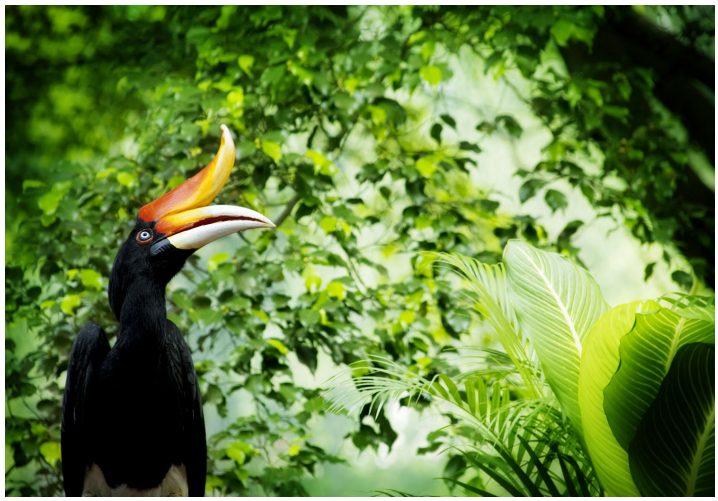
In addition to the FCPF and UN-REDD, a multi-stakeholder (civil society and government) initiative called the REDD+ Social and Environmental Standards (REDD+ SES) has also been influential in shaping the approaches of countries to safeguards. The REDD+ SES has developed a set of principles, criteria, and a framework for indicators that countries can voluntarily use to design their REDD+ programs to promote stronger social and environmental (including biodiversity) performance. Eleven countries are currently applying the REDD+ SES in the design of their REDD+ programs and others are adapting the REDD+ SES for their domestic contexts.

1.2 METHODS

This study is based on a desk review of publically available documents from government-led REDD+ programs in 15 countries. The sample of the 15 countries was selected on the basis of inclusion of representative countries from three regions that are being supported by the FCPF and/or the UN-REDD program - Africa, Asia and Latin America. The countries were selected to include a range of geographic sizes in each region and examples of the application each of the major safeguards and readiness frameworks (FCPF, UN-REDD, REDD+ SES). **Appendix 1** describes the participation of the selected countries in the various REDD+ readiness initiatives.

Brazil is the sole country in the sample that is not participating in the FCPF or UN-REDD. This report considers the ecosystem services program of the Brazilian state of Acre, and not the national REDD+ program in Brazil. Acre is widely recognized to have one of the most advanced frameworks for REDD+ of any government-led program, but as a subnational jurisdiction that does not participate in FCPF or UN-REDD, Acre has not prepared an R-PP or NPD. In lieu of these documents, the State Law on Environmental Services was reviewed for this study.

Two of the FCPF countries (Costa Rica and the Democratic Republic of the Congo [DRC]) have developed ER-PINs and these were also reviewed. The ER-PIN is developed as part of the process for obtaining compensation from the FCPF Carbon Fund for emissions reductions, and represents a more advanced description of a country's planned REDD+ activities than is described in the R-PP.



To understand linkages between national REDD+ programs and ongoing biodiversity conservation programs, the most recent NBSAP and National Report to the CBD were also reviewed for each country. A list of the documents consulted for each country is shown in **Appendix 2**.

2.0 RESULTS

1.3 WHAT TYPES OF BIODIVERSITY BENEFITS DO NATIONAL REDD+ PROGRAMS SEEK TO PROVIDE?

None of the R-PPs or UN-REDD national program documents provide specific details about the types of biodiversity benefits that they expect to achieve through REDD+. The statements regarding biodiversity are general and indicate that details will be determined during the development of the national REDD+ strategies. However, seven countries did make statements that indicate that biodiversity conservation is an important objective of the REDD+ program, including Cambodia, DRC, Costa Rica, Indonesia, Kenya, Mexico, and Vietnam (**Table 1**). The other nine countries did not describe biodiversity conservation as a main objective of their programs. However, these countries do indicate that their REDD+ programs will comply with REDD+ safeguards, and in some cases, they provide a general description of the biodiversity goals of the REDD+ programs (**Table 2**).

The countries with more advanced REDD+ programs tended to have more specific biodiversity objectives. Costa Rica and the DRC have both submitted ER-PIN's to the FCPF. These documents provide more details about the actions that will be taken to generate emissions reductions, and are a first step in the process to receiving payments from the FCPF Carbon Fund for verified emissions reductions. In the case of Costa Rica, the ER-PIN describes activities to be taken across the country, while in the DRC these are specific to the Mai Ndombe project area. Costa Rica's ER-PIN (2013) estimates that the program could contribute to the "potential conservation of 35,000 hectares of high biodiversity value forests not included in the existing system of protected areas and improvement of connectivity in biological corridors." The DRC's ER-PIN indicates that biodiversity conservation is a part of the overall goal of the Mai Ndombe REDD+ initiative. It does not include a quantitative estimate of biodiversity benefits, but indicates specific conservation targets, including the protection of important species like forest elephant and bonobos, the protection landscape connectivity, and the reduction of overhunting.

Table 1: Statements that describe the role of biodiversity conservation in the design on national REDD+ programs

Country	Stated role of biodiversity in national REDD+ program	Source	Document Date
Cambodia	"…implementation of REDD+ might be expected to lead to deliver significant benefits for biodiversity conservation and local livelihoods (called REDD+ 'co-benefits'), which should be promoted, helping Cambodia to meet its commitments under the CBD"	R-PP	3/2011
Costa Rica	Describes the importance of evaluating the potential for REDD+ to be targeted to areas of high biodiversity value.	R-PP	4/2011
DRC	"Conserve forest carbon stocks through protection of high biodiversity value forest and provision of environmental and cultural services (sacred forests)."	National REDD+ strategy, Version 3	6/2013
Indonesia	"The need for promotion of co-benefits, such as poverty alleviation, biodiversity conservation and water supply" is a criterion for the design of the program.	UN-REDD National Programme Document	5/2009
Kenya	"All activities will be designed with a focus on co-benefits such as improving biodiversity and livelihoods of forest dependent peoples."	R-PP	8/2009
Mexico	Lists three main aspirations for its REDD+ program, including "By 2020 Mexico will have maintained the biodiversity in its territory, strengthened the social capital of rural communities, and promoted economic development through sustainable rural development."	R-PP	4/2011
Vietnam	States that the program's overall objective is "the reduction of greenhouse-gas emissions through efforts to mitigate deforestation and forest degradation, increased greenhouse-gas sequestration by forests, sustainable management of forest resources, biodiversity conservation, and contribution to the successful implementation the national strategy on climate change and poverty reduction, and striving towards sustainable development."	Prime Minister's Approval of the national REDD+ program	06/2012

Table 2: An overview of the approaches to biodiversity conservation as described in the Readiness Preparation Proposal or National Program Documents of the study countries

	Country	Main Biodiversity Goals	Risks to Biodiversity Identified	Link to National Biodiversity Strategy	Biodiversity monitoring protocol	Biodiversity monitoring linked to NBSAP or other monitoring program?
Africa	Democratic Republic of Congo	To be determined during R-PP implementation.	To be identified during R-PP implementation.	Indicated that linkages will be made with DRC's CBD process.	Not specified. Planned to work with WCMC to develop biodiversity monitoring approach.	Not specified, but states that links with the CBD process is a criterion for policy options.
	Kenya	Stated that a main objective of REDD+ is to reduce pressure on forests, and to improve biodiversity.	Not specified; Country planned to use SESA as required the FCPF.	Not specified.	Not specified. Indicated that discussions will be held with an ongoing biodiversity monitoring initiative (by Birdlife) and may base system on that.	Compliance with treaties, including CBD is listed as a key area of focus.
	Republic of Congo	Not specified.	Not specified; Country planned to use SESA as required the FCPF.	Not specified.	Not specified. Planned to build on existing environmental monitoring systems as possible and identified the agency responsible for biodiversity monitoring.	Mentioned links to FLEGT; mentioned CBD as a legal justification for doing biodiversity monitoring in the REDD+ program.
	Tanzania	Draft National REDD+ Strategy and R-PP refer to existing national goals of conserving and enhancing biodiversity.	Not specified; Country planned to use SESA as required the FCPF.	Indicated intent for REDD+ program to contribute to national biodiversity conservation policies	Not specified. Biodiversity monitoring would be part of the MRV system. "The monitoring system will be implemented at national, sub-national and local levels, involving Government and state actors, civil society, non-governmental organizations (NGOs), private sector entities, local government authorities including villages, women groups, the youth and teens and consumer groups."	Not explicitly linked to the NBSAP, though REDD+ is described as supporting other laws that have biodiversity goals.
Asia	Cambodia	Stated that biodiversity should be promoted as a co-benefit of REDD+, helping Cambodia meet its commitments under the CBD.	Not specified; Country planned to use SESA as required the FCPF.	States that REDD+ is to be designed to contribute to country CBD goals.	Not specified. Monitoring of biodiversity would be included in MRV system, and would be based on existing biodiversity monitoring systems.	Indicated that REDD+ program would be designed to support CBD goals.
	Indonesia	Identified a need for promoting co-benefits such as biodiversity, and stated that REDD+ should provide sustainability for biodiversity. For official pilot sites, there was a plan to overlay mapping of biodiversity and other context to optimize site selection.	Not specified; Country planned to use SESA as required the FCPF.	Not specified.	Not specified.	Not specified.
	Nepal	Biodiversity conservation was listed as a criterion for defining strategic options for REDD+.	Not specified; Country will use SESA as required the FCPF and REDD+ SES SESA.	Not specified.	Planned to use REDD+ SES process to select protocols.	Not specified.

	Country	Main Biodiversity Goals	Risks to Biodiversity Identified	Link to National Biodiversity Strategy	Biodiversity monitoring protocol	Biodiversity monitoring linked to NBSAP or other monitoring program?
	Vietnam	Conservation of biodiversity was listed as a main goal of the program, but no specific targets were listed.	Not specified; Country planned to use SESA as required the FCPF.	Not specified.	Biodiversity and ecosystem services standards and indicators were to be considered for integration into the carbon MRV system.	Not specified.
Latin America	**Acre, Brazil**[4]	Acre indicates goals of meeting Cancun and domestic safeguards criteria (Green Climate Fund website).	Not specified	Not specified	Not specified	Aims to meet Cancun requirements and national REDD+ safeguards criteria, but no explicit description of CBD or other national biodiversity goals.
	Colombia	No specific biodiversity goals in the R-PP, however it referred to other national strategies and priorities that have biodiversity objectives (National Development Plan and National Policy for Integrated Management of Biodiversity and Ecosystem Services).	Not specified; Country planned to use SESA as required the FCPF.	Yes- Described links with monitoring done by regional autonomous sustainable development corporations and links to various national biodiversity programs.	Not specified, but indicated that monitoring of major strategic impacts on ecosystems for mitigation and adaptation to climate change such as moors, swamps and other wetlands will be prioritized and that monitoring will negative and positive impacts, and will include methods for community based monitoring.	Indicated that links to other International Instruments, including CBD, are considered fundamental to REDD+. Stated that monitoring will be based on CBD indicators of forest biodiversity.
	Costa Rica	Indicated that it is important to evaluate ways to apply funding for areas of high biological diversity value, and to use REDD+ to conserve forest in buffer zones of protected areas and for corridors	Yes- listed several risks, including lack of knowledge of conservation priorities with changing climate; Use of poor genetic stock for restoration; Increased fires risk; Inappropriate site selection.	REDD+ program designed to reinforce ongoing PES program which has biodiversity goals.	Yes- Planned to use the monitoring already in place for Proyecto Ecomercados; details not provided in R-PP.	REDD+ program was designed to reinforce ongoing PES program which has a biodiversity monitoring system.
	Ecuador	Stated an explicit objective for REDD+ to deliver multiple social and environmental benefits. Specific biodiversity benefits were not described; there is a joint initiative with the United Nations Environment Programme –	Not specified.	Not specified.	Not specified. Planned to develop a multiple-benefits monitoring system.	National Directorate of Biodiversity participates in the REDD+ process, but otherwise not specified.

[4] The state of Acre does not participate in the FCPF or UN-REDD program and therefore did not develop an R-PP or NPD. The state's Law on Environmental Services (SISA) was reviewed for this study.

	Country	Main Biodiversity Goals	Risks to Biodiversity Identified	Link to National Biodiversity Strategy	Biodiversity monitoring protocol	Biodiversity monitoring linked to NBSAP or other monitoring program?
		World Conservation Monitoring Center (UNEP-WCMC) to identify environmental benefits.				
	Guatemala	Indicated that potential benefits of REDD+ include: maintenance of ecosystem services; strengthening of the management of the national protected areas system; strengthened conservation of strategic forest ecosystems.	Not specified. Indicated that the identification of risks would consider safeguards of both UNFCCC and CBD. Planned to also use SESA.	Planned to use the Forest and Climate Change Group to harmonize approaches to UNFCCC, CBD, and CCB	Not specified. Stated that stakeholders would define indicators through a participatory process.	National Reports to CBD were listed as a potential source of information for REDD+ safeguards monitoring; also referred to the Guatemalan Forestry Information System as a possible resource.
	Mexico	One of three REDD+ Strategy aspirations: "By 2020, Mexico will have maintained the biodiversity in its territory, strengthened the social capital of its rural communities, and promoted economic development through sustainable rural development."	Stated that there is risk in prioritizing carbon and that this could result in fewer resources to areas with biodiversity or social importance. Planned to use SESA.	Stated that integration with institutions responsible for biodiversity in Mexico is considered key. No explicit mention of national biodiversity strategy.	Not specified. Planned for MRV system to be developed to work at different scales, including nested, and be able to incorporate other types of information (incl. biodiversity). MRV system will evaluate fragmentation and connectivity. Stated that the system will promote monitoring by communities.	Indicated the need to coordinate with other processes, but no details were provided.
	Peru	Not specified, though REDD+ is part of the National Forest Conservation and Climate Change Program, which includes biodiversity conservation as a priority.	Not specified; Country planned to use SESA as required the FCPF.	R-PP referred to the CBD and recognized potential links with REDD+, but provided no details of how processes would be linked.	Not specified, but provided an extensive list of expected characteristics of the monitoring program: participatory selection of indicators, including indicators of negative impacts; use of data from multiple scales; links with MRV system; monitoring to begin with simple methods and increase in complexity as capacities develop.	Recognized the relevance of CBD to REDD+, but no description of specific links to monitoring for NBSAP.

1.4 WHAT POLICIES AND MEASURES DO COUNTRIES PLAN TO USE TO GENERATE BIODIVERSITY BENEFITS?

None of the R-PP's or UN-REDD national program documents identify specific policies and measures to conserve biodiversity through REDD+, such as reducing hunting or conserving areas that are important to key species. However, the DRC National REDD+ Strategy, which was developed after the country's R-PP, states that spatial planning is being done to prioritize areas for conservation and that the national network of protected areas is being remodeled and expanded.

All of the countries that are receiving FCPF funding are required to implement a SESA that facilitates the ex-ante identification of social and environmental impacts from the REDD+ program and enables social and environmental considerations to be incorporated into the formulation of the REDD+ strategy. The SESA is designed to include a full range of social and environmental impacts, including for biodiversity. There is therefore an opportunity during the implementation of the RPP to design policies and measures for biodiversity conservation later in the REDD+ readiness process.

Costa Rica and Mexico are the only countries in the study sample to identify biodiversity risks of their REDD+ program in the R-PP. Costa Rica lists risks that are associated with forest plantations, including the risk of poor genetic stock, inappropriate use of fertilizers and pesticides, and inappropriate site selection for reforestation activities. Mexico's R-PP recognizes a risk that the prioritization of areas with high carbon stocks could lead to few resources going to areas with high biodiversity or social importance.

The seven UN-REDD national program countries reviewed have received direct support for the prioritization of REDD+ activities, including spatial analyses of the distribution of carbon and biodiversity across each country or in the case of Indonesia, for the province of Sulawesi. UNEP-WCMC brochures and reports show varying levels of detail in these analyses, with more detailed studies done for Sulawesi (Epple *et al.* 2012, Blyth *et al.* 2012), Vietnam (Mant *et al.* 2013) , DRC (Musampa *et al.* 2012) and Ecuador (Bertzky *et al.* 2010). These studies were often done concurrently with the development of the R-PPs and national program documents and their results were not included in the R-PPs or NPDs. Of the seven UN-REDD countries reviewed, only the DRC indicated that spatial planning would be part of the REDD+ design process. It is therefore unclear if and how most of the countries will make use of spatially explicit biodiversity data to prioritize REDD+ policies and measures.

The ER-PINs from Costa Rica and the DRC provided more explicit descriptions of the policies and measures used to generate biodiversity benefits than the R-PPs and national program documents. Costa Rica's ER-PIN states, "To maximize environmental co-benefits such as protection of the quality and availability of water and biodiversity, priority will be given to avoided deforestation in basins with water concessions for human consumption, irrigation, and hydroelectric power production; priority will also be given to under-represented habitats in the system of national parks and biological reserves considered as biodiversity hotspots."

The DRC Mai Ndombe initiative planned a series of specific actions to achieve biodiversity benefits, including: "environmental education and sensitization; local governance empowerment, specifically on natural resources management; capacity building on local biodiversity monitoring (hunting, prize hunting permits, etc.), completed by scientific support; anti-poaching and surveillance support for communities; and protein substitution and agricultural intensification programs to provide the community with viable, culturally welcome alternatives to bushmeat." (DRC ER-PIN 2013)

1.5 DO NATIONAL REDD+ PROGRAMS LINK TO OTHER NATIONAL BIODIVERSITY OBJECTIVES (E.G., NBSAPS THAT ARE DEVELOPED FOR CBD), AND CONVERSELY, DO THE NATIONAL BIODIVERSITY DOCUMENTS INDICATE COORDINATION WITH THE REDD+ PROGRAM?

All 15 countries in the sample studied are Parties to the CBD, have developed a national biodiversity strategy, and have submitted multiple national reports on biodiversity to the CBD. However, only eight of the countries reviewed mention CBD commitments in their R-PPs or national program documents and indicate that there will be coordination with national biodiversity conservation efforts (Table 2). Cambodia's R-PP includes one of the most explicit statements of plans to link REDD+ the CBD process, indicating that REDD+ co-benefits should be promoted, helping Cambodia to meet its commitments under the CBD. As is the case for all of the countries that indicate a planned link to the national biodiversity commitments, no details are provided on how this will be achieved.

The most recent NBSAP and national reports to the CBD also show few links to REDD+. With the exception of Colombia (2012) and Vietnam (2013), all of the NBSAPs reviewed were submitted in 2008 or earlier. They were therefore developed prior to or concurrently with early UNFCCC decisions about REDD+ and pre-dated the development of the R-PPs.

The NBSAPs of five countries describe activities to mitigate greenhouse gas emissions through forest conservation, and the earlier ones describe REDD+-type activities without using the term REDD+. These include Kenya (2000), which proposed to measure the impacts of forest on climate, but did not describe an incentive mechanism to prevent deforestation. Cambodia's NBSAP (2002) included goals of identifying mitigation measures and opportunities and risks for biodiversity and "Integration of biodiversity objectives into the future National Climate Change Action Plan." The Guatemalan NBSAP (2002) included a line of action on the use and valuation of forest areas as carbon sinks, to take advantage of climate change mitigation mechanisms to also conserve biodiversity. It also included specific objectives of building capacities to ensure competitiveness in international carbon markets.

The two countries that have revised NBSAPs, prepared as part of their commitment to achieve the Aichi Targets, are Colombia and Vietnam. Colombia's updated NBSAP describes a line of action on the provision of ecosystem services, including the role that Colombian forests play in storing carbon. There is no specific use of the term "REDD+" in the Colombian document, however. Vietnam's updated NBSAP does explicitly mention REDD+, and indicates plans to integrate biodiversity conservation targets into the REDD+ program, to map areas of high biodiversity value for REDD+, to promote the use of native species in plantations, and to apply stringent mechanisms to reduce risks to biodiversity from REDD+.

1.6 ARE BIODIVERSITY MONITORING METHODS DESCRIBED FOR THE REDD+ PROGRAM, AND ARE THESE COORDINATED WITH NBSAP OR OTHER NATIONAL MONITORING PROGRAMS?

None of the countries presented detailed descriptions of the monitoring methods that will be used for biodiversity in their REDD+ programs. However, seven countries (Kenya, DRC, Cambodia, Vietnam, Colombia, Costa Rica, Peru) described some expected characteristics of the biodiversity monitoring plans, including the intent to make use of existing environmental monitoring systems (Table 2).

In Kenya, an initiative is underway to standardize the approaches to biodiversity monitoring that is done by different NGOs, with funding from the Critical Ecosystems Partnership Facility. It includes monitoring of species, sites and habitats and is designed to monitor the impact of ongoing conservation investments. Kenya's R-PP states that the national REDD+ program will coordinate with this ongoing initiative to monitor the biodiversity impacts of REDD+.

In the DRC, the R-PP states that the monitoring of non-carbon benefits and impacts, including biodiversity, will rely as much as possible on the existing regulatory framework and agencies responsible for assessing environmental impacts. However, no details are provided about the methods applied. The R-PP also mentions ongoing biodiversity monitoring that is being performed by several NGOs as potential sources of information for the REDD+ program.

Cambodia's R-PP indicates that environmental monitoring, including for biodiversity, may be based on a scaled up implementation of the Management Information System (MIST-GIS) that was originally developed by GIZ in Uganda and has been used in Cambodia since 2004 for the management of protected areas. Cambodia also indicates an intent to make use of ongoing biodiversity monitoring programs being implemented by conservation NGO's. The country lists several possible biodiversity indicators including forest cover and land-use change, species listed as globally threatened on the International Union for Conservation of Nature's Red List, presence-absence and population assessments of key wildlife species.

For Vietnam, the R-PP described the potential for environmental monitoring for REDD+ to be integrated with the existing National Forest Inventory program, and the Forest Management Information System (FORMIS). It also stated that piloting of the integration of biodiversity and ecosystem services monitoring into an MRV system for Lam Dong province could provide a model for integration of other environmental monitoring into the national MRV system. It did not provide details on the Lam Dong monitoring system.

Colombia indicated that environmental monitoring will be based on an existing program, such as the National System of Environmental Indicators. This program already includes the monitoring of the number of hectares of natural ecosystems, numbers of threatened species, fragmentation of forests, deforestation rates, and area affected by fires.

Costa Rica's R-PP indicated that the existing monitoring system that is used for the country's payment for ecosystem services program will be used for environmental monitoring in REDD+. The R-PP does not provide details about this system.

The Peru R-PP indicated that the National Forestry Inventory that is under development will include biodiversity data that can serve as a baseline for the REDD+ program. Specific indicators for the measurement of biodiversity impacts from REDD+ will be selected after the baseline is established.

None of the R-PPs or national program documents explicitly indicated that the biodiversity monitoring system used for REDD+ will be shared with ongoing monitoring being done as part of the NBSAP. In its R-PP, Guatemala indicated that data collected for CBD may be useful for REDD+ monitoring, but does not specify what type of information that will include. The review of NBSAPs did not find any indications that biodiversity monitoring would be coordinated with the REDD+ program.

1.7 DO COUNTRIES PLAN TO USE SUB-NATIONAL REDD+ INITIATIVES TO CONTRIBUTE TO NATIONAL BIODIVERSITY GOALS AND MONITORING?

UNFCCC decisions state that REDD+ will be implemented at the national scale, but may be implemented sub-nationally on an interim basis. Forest carbon projects and subnational jurisdictional REDD+ initiatives are underway in many countries, and these could provide important opportunities for contributing to biodiversity objectives in the national REDD+ program. Sub-national REDD+ activities could be used to prioritize REDD+ investments in areas with the highest biodiversity. Subnational activities could also be used implement biodiversity monitoring that is part of the national REDD+ program, for example through ground based monitoring that serves to complement national scale monitoring that is based on remote sensing data. Subnational REDD+ activities could also be used to design and pilot monitoring methods that could be applied nationally.

All of the countries included in this study are designing REDD+ programs that may include sub-national implementation. However, the R-PPs and national program documents do not include information about how the national program may make use of these sub-national activities for monitoring biodiversity.

3.0 DISCUSSION

The R-PPs and NPDs reviewed for this study describe the very early stages of national REDD+ program design, and therefore do not yet include fully developed biodiversity goals, activities or monitoring plans. There are indications, however, that biodiversity will be given significant consideration in the REDD+ programs of at least some countries. Half of the countries reviewed made statements that indicate that achieving biodiversity benefits is a priority for the design of the REDD+ program. Furthermore, the countries with more advanced REDD+ plans, Costa Rica and DRC, include more detailed descriptions of their biodiversity goals in their ER-PINs, developed after their R-PP's.

The fact that national or sub-national governments in 10 of the study countries are voluntarily applying the REDD+ Social and Environmental Standards is another encouraging sign that biodiversity conservation is being emphasized in the design of REDD+ programs. One of the principles of the REDD+ SES is that "The REDD+ program maintains and enhances biodiversity and ecosystem services." Five criteria support this principle, including requirements to identify, prioritize, and map biodiversity impacts of REDD+, and maintain and enhance biodiversity and ecosystem service priorities. While no standard or guidelines guarantee positive outcomes, the willingness of governments to voluntarily apply these standards is promising for biodiversity conservation.

Actually achieving biodiversity benefits will depend on the policies and measures that are implemented. Due to their preliminary nature, the R-PPs and NPDs do not describe the specific policies and measures that countries plan to take. The ER-PINs, however, provide indications of the types of policies and measures that REDD+ programs may implement to benefit biodiversity. For Costa Rica, this includes prioritizing REDD+ in under-represented ecosystems in the national parks system and in areas considered to be biodiversity hotspots. The DRC plans to implement a series of capacity building measures and actions to reduce hunting pressure. In both Costa Rica and the DRC, these measures appear to be consistent with the stated biodiversity goals in the ER-PINs and would likely help deliver biodiversity benefits.

Coordination between national REDD+ initiatives and the national CBD processes is another likely way to improve the biodiversity outcomes for REDD+. REDD+ activities could make it easier to achieve at least five of the CBD Aichi Targets, through increased finance for forest conservation, increased use of sustainable land use practices, and better awareness and governance of ecosystem services (**Table 3**). Close coordination between a country's REDD+ and biodiversity programs could also result in improved biodiversity monitoring, through shared protocols, data collection, management and analysis. There are a number of indicators that are relevant for both REDD+ and the CBD (Tyrell and Alcorn, 2011) and coordinated monitoring could lead to improved and expanded data collection at reduced cost compared to the implementation of parallel monitoring systems. To date, there has been only limited coordination of national REDD+ initiatives and NBSAP processes under the CBD, with few national REDD+ programs explicitly indicating collaboration with NBSAP processes.

Parties to the CBD are required to submit national reports that describe their efforts to meet the goals of the CBD. These reports have been due at approximately four year intervals, which is a similar frequency to the national communications that countries prepare for the UNFCCC (which would include information on how safeguards are being addressed and respected). For the fifth national report to the CBD, due by March 31, 2014, countries should report on their progress towards achieving the Aichi Targets and using national biodiversity indicators and quantitative analysis and syntheses to report on the status and trends of biodiversity (CBD 2010). The indicators and analyses that countries report to the CBD could also be relevant to the REDD+ safeguards systems, however many countries will need to improve on the biodiversity monitoring that was done in the past for the CBD.

Past national reports to the CBD have generally been weak in their use of quantitative information. A review of the four national reports (Bubb *et al.* 2011) showed that 24 percent of countries reported no biodiversity indicators in their report and that only 36 percent of countries presented indicators with supporting data or figures. The CBD has recognized the limited quantitative information being presented through national reports and has taken steps to promote the use of effective biodiversity indicators. The decision from CBD COP 11 includes an Indicative List of Indicators for the Strategic Plan for Biodiversity 2011-2020, with specific indicators that countries could use at the national level. The suggested indicators for the REDD+ relevant targets are listed in Table 3. It is important to note that while reporting to the CBD is mandatory, the CBD guidelines for national reports do not require the use of specific methods or indicators for monitoring biodiversity and the indicators listed in the CBD COP 11 decision are only indicative. Several of these have clear relevance for REDD+ safeguards, however. For example, indicators that track the vulnerability of ecosystems, the conversion of natural habitats and the delivery of ecosystem services are particularly relevant for REDD+.

Table 3: The five Aichi Targets most directly relevant to REDD+, and indicative indicators for national reporting as listed in the CBD COP 11 decision for these targets

Aichi Target (CBD Decision X/2)	Indicative Indicators (CBD Decision XII/35)	Relevance for REDD+
Target 5 By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	• Trends in condition and vulnerability of ecosystems • Trends in the proportion of natural habitats converted • Trends in primary productivity	The financial incentives from REDD+ may lead to policies and measures that dramatically reduce deforestation and forest degradation. Reduced forest fragmentation is not explicitly addressed under the UNFCCC, but countries could choose to address fragmentation in the design of their REDD+ program.
Target 7 By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	• Trends in the proportion of products derived from sustainable sources	The goal of managing agricultural areas sustainably implies that agriculture would not drive deforestation and this is vital for the success of REDD+. Also, the sustainable management of forests relates directly to REDD+, and this is an activity that may be directly incentivized through REDD+.
Target 11 By 2020, at least 17 percent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	• Trends in the delivery of ecosystem services and equitable benefits from protected areas	Some forest carbon projects are already contributing to the expansion and improved management of protected areas (Section 2 of this report). At the national level, there is an opportunity for countries to use REDD+ to improve the management and/or expand the protected areas system.
Target 14 By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	• Trends in emerging zoonotic diseases • Trends in nutritional contribution of biodiversity • Trends in natural resource conflicts • Trends in the condition of selected ecosystem services • Trends in biocapacity	REDD+ provides incentives for maintaining and restoring forest, thereby providing carbon storage and sequestration and other ecosystem services, like water regulation and provision. REDD+ can be designed to maximize the provision of ecosystem services to local people.
Target 15 By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 percent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	• Population trends of forest-dependent species in forests under restoration	This target speaks directly to the role of forests as reservoirs of carbon. The '+' in REDD+ includes the conservation and enhancement of forest carbon stocks, making REDD+ a possible source of finance to support this target.

The decision from CBD COP 10 explicitly encourages countries to seek synergies in national reporting under biodiversity related conventions, which would include REDD+ under the UNFCCC. However, just over half (8 of 15) of the countries reviewed indicated that there would be some level of coordination between the two programs. In all cases, the mention of the CBD process in the REDD+ documents was brief and provided few details about the degree to which synergies will be realized. The NBSAPs and national reports to the CBD mostly echo the lack of coordination between national REDD+ and biodiversity conservation programs. An encouraging sign, however, is that the two revised NBSAPs (Colombia and Vietnam) do indicate that coordination with the national REDD+ programs is planned.

Regardless of the policies and measures that are implemented, or the degree of coordination among government programs, a robust monitoring system must be in place for a country to understand the impacts of its REDD+ program, including on biodiversity. As reflects their preliminary nature, the R-PPs and national program documents currently include few details about biodiversity monitoring. Seven of the 15 countries referred to existing systems that may be useful for monitoring the biodiversity impacts of REDD+, but the details of these monitoring systems were not provided and details regarding the ways in which the REDD+ biodiversity monitoring would make use of existing systems are still to be worked out. Only Colombia and Guatemala indicated that safeguards monitoring for REDD+ would make use of the monitoring that is done for the CBD, and these countries did not provide details about the type of information that would be shared.

All of the countries reviewed here describe some form of sub-national implementation of REDD+ that will be nested into the national REDD+ program. However, none of the R-PPs or NPDs describe how biodiversity conservation issues would be treated in this nested system. Nested REDD+ may provide several opportunities for biodiversity, including ways to incentivize sub-national REDD+ initiatives to target high conservation value areas. There may also be opportunities to design and test biodiversity monitoring methods in sub-national initiatives for subsequent application nationally. National programs would often benefit from the monitoring that is done in forest carbon projects and other sub-national initiatives, as these can have greater ability to collect data from field surveys than the national program. Ground-based methods are an important complement to the remote sensing-based monitoring that national REDD+ programs are likely to use.

In summary, the review of early national REDD+ program documents and NBSAPS, shows some promising signs that REDD+ will be designed to deliver meaningful biodiversity benefits. This is not universal to all countries, however, and even in the countries where biodiversity conservation is given greater priority, the intent to conserve biodiversity must be translated into policies and measures that are successfully implemented. It is too early to tell from current REDD+ programs whether this will occur.

Several specific actions can help countries to achieve better biodiversity impacts from their REDD+ programs. A key first step is the inclusion of clear biodiversity objectives in national REDD+ strategies and other initiatives such as the emissions reductions programs planned for the FCPF Carbon Fund. A specific description of the expected biodiversity benefits, for example expansion of the protected areas system, or the maintenance of populations of high biodiversity value species, is essential for planning REDD+ activities and designing a monitoring plan that can determine if biodiversity benefits have been achieved, and negative impacts avoided.

For FCPF countries, the SESA is an important opportunity to explicitly consider the possible biodiversity impacts of REDD+ strategy options and to refine the options before they are finalized. Experts that are familiar with the country's biodiversity and have access to biodiversity data should participate in the SESA process to ensure better assessment of likely impacts on biodiversity. These experts should also be familiar with existing national biodiversity priorities (as in the NBSAPs) so that they can identify synergies with REDD+. Though the UN-REDD countries are not required to implement the SESA, they should undertake a similar review of REDD+ strategy options with explicit consideration of biodiversity impacts. The UN-REDD's BeRT is an optional tool that, like the SESA, is designed to be used iteratively during the design of the REDD+ program to facilitate the identification of risks and opportunities to enhance benefits. The

REDD+ SES and its accompanying guidance provide a third tool to promote the analysis of biodiversity impacts of a REDD+ program during the design phase, and to improve the design based on this analysis.

The quality of the biodiversity monitoring plans for national REDD+ programs will also determine the impacts of REDD+ on biodiversity. Monitoring plans should have the ability to detect whether the biodiversity objectives of the REDD+ programs are being met, and to detect negative impacts so that these can be quickly mitigated. Monitoring plans that are burdensome or expensive will be less likely to be implemented, so countries should look for opportunities to make use of, and build on, existing monitoring initiatives. Monitoring that is used for reporting to the CBD represents one opportunity. Another opportunity is the development of a standardized approach to biodiversity monitoring that could be implemented across sub-national REDD+ initiatives like forest carbon projects or sub-national jurisdictional REDD+ programs.

REFERENCES

Bubb, P., Chenery, A., Herkenrath, P., Kapos, V., Mapendembe, A., Stanwell-Smith, D., Walpole, M. 2011. National Indicators, Monitoring and Reporting for the Strategic Plan for Biodiversity 2011-2020: A Review of Experience and Recommendations in Support of the CBD Ad Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan 2011-2020. UNEP-WCMC with IUCN and ECNC.

Christophersen, T. 2010. REDD Plus and Biodiversity. Biodiversity and Climate Change issue paper No. 5. UNEP, CBD.

Gardner, T. A., Burgess, N. D., Aguilar-Amuchastegui, N., Barlow, J., Berenguer, E., Clements, T., & Vieira, I. C. (2012). A framework for integrating biodiversity concerns into national REDD+ programmes.*Biological Conservation*,*154*, 61-71.

Gardner, T. A., Burgess, N. D., Aguilar-Amuchastegui, N., Barlow, J., Berenguer, E., Clements, T., & Vieira, I. C. (2012). A framework for integrating biodiversity concerns into national REDD+ programmes.*Biological Conservation*,*154*, 61-71.

Forest Carbon Partnership Facility. 2013. World Bank Safeguard Policies and the UNFCCC REDD+ Safeguards. FMT Note CF-2013-3.

Harvey, C.A., B. Dickson and C. Kormos. 2010. Opportunities for conserving biodiversity through REDD. *Conservation Letters* 3: 52-61.

Miles, L., K. Trumper, M. Osti, M. Munroe and C. Santamaria. 2013. REDD+ and the 2020 Aichi Biodiversity Targets: Promoting synergies in international conservation efforts. UN-REDD Programme Policy Brief.

Parrotta, J.A., C. Wildburger & S. Mansourian (eds.), 2012. 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+. IUFRO World Series Volume 31. Vienna. 161 p.

Secretariat of the Convention on Biological Diversity. 2009. Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change. Technical Series No. 41, Montreal.

Secretariat of the Convention on Biological Diversity. 2011. REDD plus and biodiversity. CBD Technical Series 59. Montreal.

Tyrrell, T.D. & Alcorn, J.B. 2011. Analysis of possible indicators to measure impacts of REDD+ on biodiversity and on indigenous and local communities: A report to the Convention on Biological Diversity. Tentera, Montreal, Canada.

APPENDIX 1

THE 15 REDD+ PROGRAMS REVIEWED IN THIS STUDY AND THEIR PARTICIPATION IN KEY REDD+ READINESS INITIATIVES

REDD+ Programs Reviewed	FCPF participant	FCPF status & funding, as of October 2013	UN-REDD National Programme Country	UN-REDD Funding	Use of REDD+ SES
Africa					
Democratic Republic of Congo (DRC)	✓	$3.4M disbursing for R-PP Preparation Grant; Additional $5M request approved; Submitted ER-PIN for FCPF Carbon Fund	✓	$5.5M	Nationally, for exchange and learning
Kenya	✓	Readiness Preparation Grant in preparation			
Republic of Congo	✓	$3.4M disbursing for R-PP Preparation Grant	✓	$4M	
Tanzania	✓	Not seeking FCPF funding. Readiness funding is from Norway (~$17M)	✓	$4.3M	Nationally, for good practice guidance
Asia					
Cambodia	✓	Readiness Preparation Grant in preparation	✓	$3M	
Indonesia	✓	$3.6M disbursing for R-PP Preparation Grant. Additional $5M being requested	✓	$5.6M	In 2 provinces
Nepal	✓	$3.4M disbursing for R-PP Preparation Grant			Nationally
Vietnam	✓	$3.8M disbursing for R-PP Preparation Grant	✓	Phase I: $4.4M Phase II: $30M	
Latin America					
Acre, Brazil					In 2 states
Colombia	✓	Readiness Preparation Grant approved			
Costa Rica	✓	$3.6M disbursing for R-PP Preparation Grant; ER-PIN presented and Letter of Intent signed for sales of emissions reductions to the Carbon Fund			Nationally, for good practice guidance
Ecuador			✓	$4M	Nationally
Guatemala	✓	Readiness Preparation Grant in preparation			Nationally
Mexico	✓	Readiness Preparation Grant in preparation			Nationally
Peru	✓	Readiness Preparation Grant in preparation			In 1 department

APPENDIX 2

COUNTRY DOCUMENTS CONSULTED

Brazil

- Real-Time Evaluation of Norway's International Climate and Forest Initiative- Contributions to National REDD+ Processes 2007-2010-- Country Report: Brazil (2010)
- Brazil NBSAP version 2
- Fourth National Report to the Convention on Biological Diversity—Brazil (October 2010)
- Acre State Law on Environmental Services (2010, unofficial translation)

Cambodia

- Readiness Preparation Proposal (March 2011)
- Kapos, V., Ravilious, C., Leng, C., Bertzky, M., Osti, M., Clements, T., Dickson, B. (2010) *Carbon, biodiversity and ecosystem services: Exploring co-benefits. Cambodia.* UNEP-WCMC, Cambridge, UK.
- National Biodiversity Strategy and Action Plan (April 2002)
- Cambodia UN-REDD National Programme (2011)
- Fourth National Report to the Convention on Biological Diversity (October, 2010)

Colombia

- Propuesta de preparación—Colombia (November, 2013)
- Política Nacional Para la Gestión Integral de la Biodiversidad y sus Servicios Ecosistémicos (2012)
- Cuarto Informe Nacional Ante el Convenio Sobre la Diversidad Biológica (August 2010)

Costa Rica

- Propuesta para la Preparación de Readiness R-PP Costa Rica (April 2011)
- Emission Reductions Program Idea Note (ER-PIN) (February 2013)
- Costa Rica Estrategia Nacional de Biodiversidad (2000)
- Republica de Costa Rica IV Informe de Pais al Convenio sobre la Diversidad Biologica (November 2009)

DRC

- R-PP version 3.1 (July, 2010)
- UN-REDD National Programme Document- Democratic Republic of Congo (March, 2010)
- Emission Reductions Program Idea Note (ER-PIN), Mai Ndombe REDD+ ER Program (May 2013)
- Plan National Strategique D'Action enMatiere de la Diversite Biologique (NBSAP)- Période de 2002 à 2010 (January 2002)

- Quatrième rapport national sur la mise en œuvre de la Convention sur la Diversité Biologique (4th National Report to the CBD) (March 2009)
- Musampa Kamungandu, C., Mane, L., Lola Amani, P., Bertzky, M., Ravilious, C., Osti, M., Miles, L., Kapos, V., Dickson, B. (2012) Mapping potential biodiversity benefits from REDD+. The Democratic Republic of the Congo. Prepared by UNEPWCMC, Cambridge, UK; Ministry of the Environment, Nature Conservation and Tourism of the DRC; and the Satellite Observatory for Central African Forests. UN-REDD Programme, DRC.

Ecuador

- National Programme Document- Ecuador (March 2011)
- Política y Estrategia Nacional de Biodiversidad del Ecuador 2001 – 2010
- Cuarto Informe Nacional para el Convenio sobre la Diversidad Biologica (January 2010)
- Bertzky, M., Ravilious, C., Araujo Navas, A.L., Kapos, V., Carrión, D., Chíu, M., Dickson, B. (2010) *Carbon, biodiversity and ecosystem services: Exploring co-benefits. Ecuador.* UNEP-WCMC, Cambridge, UK.

Guatemala

- Propuesta de preparación (March 2013)
- Estrategia Nacional para la conservación y uso sostenible de la Biodiversidad y Plan de Accion Guatemala (1999)
- IV Informe Nacional de Cumplimiento a los Acuerdos del Convenio sobre la Diversidad Biologica (2009)

Indonesia

- Indonesia R-Plan (May 2009)
- Indonesia UN-REDD National Joint Programme (2009)
- Indonesia Biodiversity Strategy and Action Plan National Document (2003)
- Fourth National Report: The Convention on Biological Diversity (2009)
- Blyth, S., Ravilious, C., Purwanto, J., Epple, C., Kapos, V., Barus, H., Afkar, H., Setyawan, A., Bodin, B. (2012) Using spatial information to promote multiple benefits from REDD+ in Indonesia. A compendium of maps for Central Sulawesi Province. UNEP-WCMC, Cambridge, UK.
- Epple, C., Williamson, A., Thorley, J. (2012) Strengthening benefits from REDD+ for biodiversity, ecosystem services and
- livelihoods. A guide to tools and resources that can help to plan for multiple benefits from REDD+ in Indonesia. UNEP-WCMC, Cambridge, UK.

Kenya

- The Kenya National Biodiversity Strategy and Action Plan (March 2000)
- Fourth National Report to the Conference of Parties to the Convention on Biological Diversity (2009)
- REDD+ Readiness Preparation Proposal Kenya (August 2009)
- UNEP-WCMC Carbon, biodiversity & ecosystem services: exploring co-benefits. Kenya Profile.

Mexico

- Propuesta de preparación (R-PP) (April 2011)
- Visión de México Sobre REDD+-Hacia una Estrategia Nacional (2010)
- Estrategia nacional sobre biodiversidad de México (2000)

- Mexico- Quinta Comunicación Nacional Ante la Convencion Marco de las Naciones Unidas Sobre el Cambio Climatico

Nepal

- Nepal's Readiness Preparation Proposal REDD+ 2010-2013 (September 2010)
- Nepal Biodiversity Strategy (2002)
- Nepal Fourth National Report to the Convention on Biological Diversity

Peru

- Plantilla de Propuesta para la Preparacion de Readiness (R-PP) (March 2011)
- Peru: Estrategia Nacional sobre Diversidad Biologica (2001)
- Estrategia Nacional Forestal- Version Concertada con Instituciones y Actores Forestales (2002)
- Cuarto Informe Nacional Sobre la Aplicación del Convenio de Diversidad Biologica Años 2006-2009 (December 2010)

Republic of Congo

- National Biodiversity Strategy and Action Plan (undated)
- Quatrieme Rapport National Sur la Diversite Biologique (August 2009)
- Proposition pour la Préparation à la REDD+ (RPP) République du Congo (September 2011)
- Republic of the Congo Programme to Support the REDD+ Process (2012-2014) (March, 2012)

Tanzania

- National Strategy for Reduced Emissions from Deforestatoin and Forest Degradation (REDD+) (2nd Draft, June 2012)
- Miles, L., Kabalimu, K., Bahane, B., Ravilious, C., Dunning, E., Bertzky, M., Kapos, V., Dickson, B. 2009. *Carbon, biodiversity and ecosystem services: exploring co-benefits. Tanzania*. Prepared by UNEP-WCMC, Cambridge, UK & Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism, Dar es Salaam. UN-REDD Programme, Tanzania.
- Tanzania Readiness Preparation Proposal (R-PP) (October, 2010)
- National Biodiversity Strategy and Action Plan (August 2001)
- Tanzania Final UN-REDD National Joint Programme (2009)
- Fourth National Report on Implementation of Convention on Biological Diversity (CBD) (July 2009)

Vietnam

- Readiness Preparation Proposal (R-PP) Socialist Republic of Vietnam (November 2011)
- UN-REDD Vietnam Programme (2009)
- Decision No. 79/2007/QD-TTg of May 31, 2007, Approving the National Action Plan on Biodiversity to 2010 and Orientations towards 2020 for the Implementation of the Convention on Biological Diversity and the Cartagena Protocol on Biosafety (2007)
- Decision No. 799/QD-TT of 27 June 2012, Decision on Approval of the National Action Program on Reduction of Greenhouse Gas Emissions through Efforts to Reduce Deforestation and Forest Degradation, Sustainable Management of Forest Resources, and Conservation and Enhancement of Forest Carbon Stocks 2011-2020

- Decision No. 1250/QD-TTg of July 31, 2013, Approval of National Biodiversity Strategy to 2020, vision to 2030
- 4th Country Report; Vietnam's Implementation of the Biodiversity Convention (Draft) (2008)
- Mant, R., Swan. S., Anh, H.V., Phuong, V.T., Thanh, L.V., Son, V.T., Bertzky, M., Ravilious, C., Thorley, J., Trumper, K., Miles, L. (2013) Mapping the potential for REDD+ to deliver biodiversity conservation in Vietnam: a preliminary analysis. Prepared by UNEP-WCMC, Cambridge, UK; and SNV, Ho Chi Minh City, Vietnam

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