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CASEBOOK OF REDD PROJECTS IN LATIN AMERICA



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IDESAM
Instituto de Conservação e
Desenvolvimento Sustentável do Amazonas



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The projects section of this document is based on written and verbal responses provided by project managers to a formal questionnaire. Therefore, the authors make no representations or claims regarding the veracity or accuracy of the facts, figures, data or other information it contains.

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SUMMARY

PART 1 INTRODUCTION TO THE CASEBOOK 7

FOREWORD.....	9
PROJECTS.....	10
CLIMATE CHANGE AND TROPICAL DEFORESTATION	10
POSITIVE INCENTIVES FOR THE REDUCTION OF EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION.....	12
REDD? (+)?.....	16
REDD AND INDIGENOUS PEOPLES AND LOCAL COMMUNITIES.....	17
THE VOLUNTARY CARBON MARKETS.....	19

PART 2 SUMMARY OF REDD PROJECTS IN LATIN AMERICA 23

HOW TO READ THE PROJECTS.....	24
PROJECTS.....	26
PROJECTS IN INITIAL PHASE.....	60
OTHER RELEVANT INITIATIVES.....	64

PART 3 CONSOLIDATION, ANALYSIS AND FINAL CONSIDERATIONS 73

OVERALL ANALYSIS OF THE PROJECTS	74
FINAL CONSIDERATIONS	79

ANNEXES 81

ACRONYMS, GLOSSARY AND BIBLIOGRAPHY

PART 1

INTRODUCTION

TO THE CASEBOOK

 FOREWORD

This casebook was developed by the Institute for Conservation and Sustainable Development of Amazonas (Idesam) in partnership with The Nature Conservancy-Brazil (TNC-Brazil). It offers a streamlined and practical approach to presenting REDD pilot projects and initiatives that are being developed in Latin American countries.

The casebook's objective is to identify and analyze the structure and strategies of subnational projects and activities and their possible contribution for an international REDD mechanism within the UN Framework Climate Change Convention (UNFCCC) and the carbon markets. Data about each project were collected through responses to questionnaires answered by project representatives, and these answers were comparatively analyzed. The result of this effort is a handy guide for relevant actors such as governments, investors, UNFCCC country negotiators and civil society at large for the creation and implementation of REDD activities.

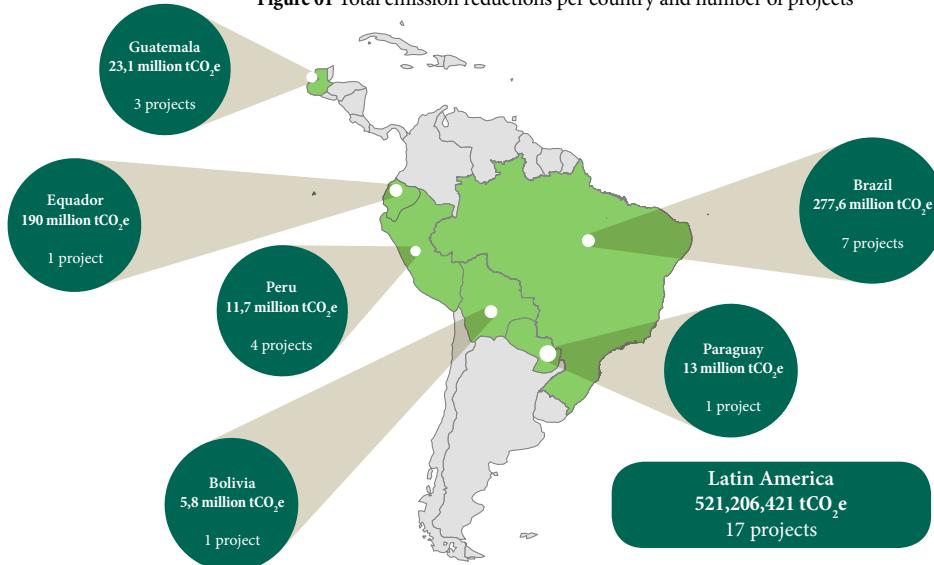
There is a great deal of expectation by subnational governments and local stakeholders (municipalities, private property owners, indigenous groups, NGOs, etc.) regarding the potential of REDD mechanisms to promote forest conservation and to bring sustainable development activities to communities in practically every country in Latin America. State and municipal governments are seeking to increase their involvement in international discussions and their roles have been proving to be increasingly relevant. Thus, there is a growing need for concrete information not only about results of negotiations, but also about projects already underway.

In this casebook 17 projects classified at advanced stages of implementation were mapped (see page 23). The projects classified as being in "advanced implementation stage" were those who presented at least: a defined baseline scenario and quantification of emission reductions – even if at preliminary stage, activities in implementation and/or contacts already established with investors to sell the project's credits. It includes the following countries: Brazil, Bolivia, Ecuador, Guatemala, Paraguay and Peru.

Apart from subnational projects, other national and international initiatives relevant to REDD, such as the World Bank's Forest Carbon Partnership Facility (FCPF), the UN-REDD Programme and Brazil's Amazon Fund, are also presented.



Figure 01 Total emission reductions per country and number of projects



PROJECTS

The primary goal of this casebook is to provide a panorama of REDD activities currently in progress throughout Latin America. Despite the uncertainty surrounding REDD negotiations in the arena of the UNFCCC, diverse countries, states and institutions are already developing concrete REDD projects and initiatives and these experiences are proving to be of great relevance, not only for promoting forest conservation and reducing Greenhouse Gas (GHG) Emissions, but also for generating lessons that can be useful for other projects worldwide.

Subnational pilot projects and initiatives are tremendously important as they can be implemented more expediently and also can generate important lessons in the sense of “learning by doing,” that lead to replication in other situations. These initiatives also play a fundamental role in the process of REDD readiness, both in technical/methodological terms but also building institutional capacity in countries that as yet lack sufficient governance required to implement REDD schemes at the national level. In this way, we believe that subnational projects ought to be considered valuable tools for the implementation of REDD, even for countries that aspire to establish national schemes.

CLIMATE CHANGE AND TROPICAL DEFORESTATION

Climate changes and global warming are the largest environmental problems of all time. The level of scientific proof achieved in recent years leaves no doubts that human activity is the primary cause of these processes (IPCC, 2007). Average global temperatures already register an increase of 0.7°C, caused by the growing concentration of atmospheric greenhouse gases (GHG) (IPCC, 2007). The increasing frequency of extreme natural phenomena such as hurricanes, cyclones, torrential rains and prolonged droughts has already affected the lives of millions of people around the world.

The tropical forests of the world today cover approximately 1.5 billion ha (44% are in Latin America), of which approximately 13 million are lost annually, representing an average rate of deforestation of approximately 0,9% per year. This fact confirms that tropical forests are increasingly under threat and that this tendency, unfortunately, is not decreasing.

The Amazon suffers (and will suffer even more) the negative impacts of climate change. In 2005 the region experienced a drought that had a tremendous impact on the people residing in the region, bringing great economic, social and environmental losses. Moreover, in the beginning of 2009, the largest regional flood on record was registered in the State of Amazonas, Brazil. With climate change, droughts are predicted to happen more frequently, occurring at intervals of 3-6 years (Cox et al., 2003). According to the IPCC (2007), the scenario is actually much worse than anticipated. In the expected scenarios, an increase of 4 to 6°C is predicted in the next hundred years for mean surface temperatures and the Amazon is the region where the highest increases in temperature may occur.



THE UNFCCC - UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

In 1992 the UN Framework Convention on Climate Change was established to tackle the issues of global warming and climate change. A subsequent development was the adoption of the Kyoto Protocol in 1997, which imposed GHG emissions reductions targets on industrialized countries (Annex 1 countries) of an average 5.12% in relation to 1990 emission levels.

Being the main responsible for the release of Greenhouse Gases throughout history, only developed countries have assumed mandatory emissions reduction targets. In order to assist these countries to reach their targets, flexible mechanisms¹ were created, such as the Clean Development Mechanism (CDM), through which Annex1 countries can reduce their emissions outside of their own borders through voluntary projects implemented in developing countries. The CDM can be seen as an important instrument implemented by the Convention to achieve its objectives, and was largely responsible for the creation of the “Carbon Market”.

Since 2004, 1,894 projects have been registered² worldwide³ through the CDM. Despite its role determining the eligibility of afforestation and reforestation practices, the CDM does not address a large part of the problem. All of the emissions reductions attainable through “domestic targets for developed

¹ The three current flexible mechanisms are: CDM- Clean Development Mechanism, Joint Implementation and Emissions Trading | ² Within the “Project Approval Cycle” of the CDM, the Executive Board configures the UNFCCC’s official approval, guaranteeing that the credits generated are valid in the international carbon market. | ³ The list of all the projects being analyzed in the CDM Pipeline can be obtained at <http://www.cd4cdm.org>

countries” or by “Clean Development Mechanism” projects leave out nearly 20- 25% of Global Greenhouse Gases⁴ (Fearnside, 2000; Houghton, 2005; Stern, 2006), the emissions share that is generated by deforestation of tropical forests in developing countries.

Therefore, any efforts to reduce GHG emissions from deforestation and forest degradation are at present excluded from participation in the Climate Change Regime. Forest conservation, or valuing of the “tree left standing” as a carbon stock is not acknowledged under the Kyoto Protocol and its inclusion remains under discussion by the UNFCCC signatories.

POSITIVE INCENTIVES FOR THE REDUCTION OF EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD+)⁵

THE CLIMATE CHANGE NEGOTIATIONS

Forests have always been a controversial topic at the Climate Convention. During COP-7⁶ in 2001, when the “Marrakesh Accords” were approved to regulate valid CDM activities, the topic was excluded from the debate. Among the justifications as to why activities associated with avoided deforestation were excluded, it was alleged that the adoption of measures to contain deforestation involved numerous uncertainties and methodological difficulties and could affect the national sovereignty of tropical forests nations as well as their right to develop.

In the following years various studies and proposals were conducted in parallel to official discussions, in search of voluntary forms of compensation for efforts undertaken to reduce emissions from deforestation. Among these, special importance was given to the proposal to create a “Mechanism for Compensation for Reduced Deforestation” (Santilli et al, 2005)⁸, presented for the first time in 2003 during the COP-9 in Milan.

These initiatives coupled with Parties’ efforts were fundamental for the return of forests to the UNFCCC’s agenda, in 2005 during the 11th Conference of the Parties (COP11/MOP 1). The official proposal came from a joint submission by Papua New Guinea and Costa Rica⁹, and was supported by: Bolivia, Central Africa Republic, Chile, Congo, Democratic Republic of the Congo, Dominican Republic and Nicaragua (group known as the Coalition of Tropical Forest Countries)¹⁰.

⁴ It is worth noting here that we will not discuss the United States, who remain out of the Kyoto Protocol but correspond to nearly 30% of global emissions in the treaty. | ⁵ REDD+ (reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries). | ⁶ Seventh Conference of Parties on Global Climate Change- COP 7, held in Marrakesh, India, in 2001. | ⁷ The document known as the “Marrakesh Accords” (Decision 17/CP.7), was a package of policies and measures for the regulation of valid activities under the Clean Development Mechanism (CDM). | ⁸ This proposal can be found at the book “Tropical Deforestation and Climate Change”, available at: www.ipam.org.br | ⁹ Available at <http://unfccc.int/resource/docs/2005/cop11/eng/misc01.pdf>. | ¹⁰ For more details about the historical context of REDD, see Humphreys, 2008



In 2006, during the COP-12/MOP 2 in Nairobi, all countries were invited to submit their visions for policy approaches and positive incentives that could be adopted for the “Reduction Emissions in Developing Countries” within the framework of the Convention¹¹. In February of 2007, Brazil presented its proposal for “policy approaches and positive incentives for the reduction of forest emissions in developing countries¹²”. Brazil proposed a voluntary and performance-based mechanism that would compensate developing countries who could demonstrate real reductions in deforestation rates in relation to ten year historical averages. This proposal was later implemented nationally with the launching of the Amazon Fund.

At the end of 2007, during the COP-13 in Bali, significant advances were reached for the inclusion of forests in the international climate regime. The Bali Action Plan, also known as the “Bali Road Map”, was adopted, establishing a process for dialogue to further the implementation of the Convention until 2012 and beyond. The REDD theme was one of the most discussed subjects in the two year period between Bali and Copenhagen (COP 15, 2009). Another fundamental role of the Bali meeting was the definition of methodological directives¹³ to provide incentive for the development of pilot initiatives.

In order to implement the Bali Roadmap, two working groups were created: The AWG-LCA¹⁴ and the AWG-KP¹⁵. The first group’s main objective is to discuss the long-term cooperation under the framework of the Convention and is where REDD negotiations take place. The AWG-KP discusses specific questions related to the Kyoto Protocol and its probable new period of commitment. Throughout the year, 2009, five rounds of international negotiation took place within these groups. In this process, REDD was undoubtedly the most debated and controversial subject. The main obstacles identified in this dialogue process are detailed in the next page.

¹¹ The COP/13 Decision provides a best practices guide to promoting pilot initiatives and projects, which shall be used as “demonstration REDD activities” to support the UNFCCC’s process of negotiations. The document is available at www.idesam.org.br/documentos/01_ResumoCOP13.pdf | ¹² Ad-hoc Working Group on Long-Term Cooperative Action | ¹³ Ad-hoc Working Group on the Kyoto Protocol

REDD'S THREE "BOTTLENECKS" (FINANCING, SCALE AND BASELINE)

1 Financing

Undoubtedly, the most important theme under discussion for building up a REDD regime under UNFCCC is the financial arrangement that will be structured to allow its operations. The options on the table are:

- a Public funding based on voluntary donations, additional to ODA (Official Development Assistance Agencies)
- b Proposals tied to a market mechanism, as funds from the sale and auction of emission allowances, where REDD could generate credits which could be used by developed countries in fulfilling their mandatory emissions reduction targets, and
- c A mixed approach where initial investments are supported by public funds or donations to support the readiness process of developing countries followed by migration to market mechanisms.

The main advantage of market mechanisms is the possibility of private sector participation, which has proven essential given the enormous volume of resources required to halt tropical deforestation. In addition, the presence of market-based funding permits a greater flexibility in capturing funds and consequently, faster implementation timeframes. Concerning market-based funding and approaches, the main questions focus on the capacity to capture the magnitude of financial resources necessary to effectively reduce emissions. According to Stern (2006), the volume of resources necessary to reduce deforestation is between five and fifteen billion dollars per year. Other estimates, such as the one by Eliasch (2008), indicate a need of US\$17 – 33 billion per year to reduce deforestation by 50% by 2030. Nevertheless it is worth highlighting that a market mechanism for REDD should necessarily be tied to a commitment to more ambitious emission reduction commitments by developed countries in order to avoid compromising the environmental balance of the regime.

2 Scale

Another theme of great importance for REDD is the scale of implementation that would be considered for a mechanism to operate within the Convention. On one hand, there is a proposal for national REDD schemes, where securing and distributing resources and the implementation of activities are direct responsibilities of national governments. The main argument for this proposal is the assumption that national systems avoid leakage¹⁶ from one project to the other, and facilitates monitoring activities.

On the other side there is a proposal for REDD implementation through projects at the subnational level, similarly to what already happens with the Clean Development Mechanism (CDM) proj-



ects. This approach is justified by arguments that methodological problems can readily be resolved and that only through projects directed to the carbon market is possible to attain the volume of resources necessary to effectively tackle the problem of global deforestation. Despite the risk of leakage at the subnational scale, it is possible to identify and monitor problems and exclude these emissions from each project's emissions quotas. Besides this, activities at the subnational scale can be efficient in fundraising and implementation of its activities, which could generate knowledge and capacity that can be replicated not only in other projects, but for initial steps in the transition to a national REDD scheme.

Currently both proposals have converged towards a hybrid system or a "nested approach"¹⁷, where the implementation of subnational projects and activities are permitted under national accounting and monitoring. As long as a robust and trustworthy accounting exists for all transactions at the subnational scale, it is possible to track each ton transacted, avoiding double-counting and still allowing for the integration of projects within a national strategy.

3 Baseline

Lastly, it has been practically impossible to reach consensus about the best form of establishing the national reference levels of deforestation, or baselines, upon which the emissions reductions expected under REDD activities would be calculated. Currently, there are two basic approaches being considered:

¹⁶ "Leakage is defined as the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the project boundary, and which is measurable and attributable to the project activity"

¹⁷ For more details see Pedroni *et al* 2009.

- i Through historical deforestation rates considering the average of previous deforestation and projecting it to a future baseline scenario; and
- ii Through projections and modeling of simulated deforestation based on the analysis of presumptions and socioeconomic parameters that interfere with the dynamics of deforestation in the future, such as population growth, infrastructure construction, governance policies and others.

The great challenge is how to harmonize different deforestation and forest conservation scenarios in various countries without generating perverse incentives. For example, if the devised mechanism only benefits countries with large historic rates of deforestation, the result could be the opposite, creating an incentive for those who deforested the most. Besides this, the adoption of a historical baseline for countries like in the Congo basin or Guiana, with large forest cover and a history of low rates of deforestation, could fail to reflect a possible scenario of pressure over their forests in the future. The fact that historical deforestation rates were low does not necessarily imply that these forests will continue to be preserved. Thus, it is fundamental to structure a mechanism which allows to reward countries that have decreased their deforestation rates and those who have conserved their forests.

There are currently some proposals that seek to reconcile these two approaches considering the development needs and the deforestation pressure over forests in diverse countries of the world. These approaches propose that besides reduction targets, countries should also be compensated for maintaining their forest carbon stocks (Cattaneo, 2009; Lima *et al.*, 2009; Strassburg *et al.*, 2008; Moura-Costa, 2009).

REDD? (+)?

Beyond considerations about the possible implications, benefits and impacts of REDD activities, there are still disagreement on whether some land use activities should be considered or not in a future REDD scheme.

The REDD definition, on its original proposal, includes activities that “reduce emissions from deforestation and forest degradation” (UNFCCC, 2005). However, since the announcement of the Bali RoadMap (decision/ CP13, UNFCCC 2007), new activities started to be considered as the document also mentions “the role of conservation, sustainable management of forests and the enhancement of forest carbon stocks in developing countries”.

In terms of “the role of conservation” the main question under discussion is how forest conservation efforts in areas that are not immediately threatened should be considered. Some countries, such as Brazil, proposes that such efforts must be acknowledged, although should not generate emissions reductions for offsetting. One possible option to deal with this issue is called the “Stock-flow” approach. Among the stock-flow approach proposals – Strassburg , 2008, Moura Costa,

2009, is worth to site the proposal made by Cattaneo (2008), which presents a resource channeling system where a percentage of the resources generated by credits from emission reduction would be put in a common fund to remunerate countries that keep their forests conserved. This approach can be especially benefic in those countries of high forest cover and low deforestation rates, assuring that the necessary resources to combat deforestation threats as well as implementing actions that guarantees the permanence of conservation for the still non-threatened forests.

On the issue “sustainable management of forests”, the focus of the discussion is what actions should be considered as carbon stocks “maintenance”. This concern is justifiable considering the importance of guaranteeing that carbon stocks will not diminish in the long term (Forest degradation). Some countries discuss the use of the terminology, which in the Bali Action Plan is “Sustainable Management of Forests”. There were some attempts to change this to “Sustainable Forest Management”, facing strong resistance by NGO’s that understand the possibility of association to unsustainable practices.

Related to the “enhancement of forest carbon stocks”, the discussion focuses on how certain activities may restore forest ecosystems to maintain and increase carbon stocks while also assuring its environmental integrity. This theme mainly refers to activities of forestation and reforestation and in what way they occur. One of the possibilities would be the inclusion of recuperation of areas using native species.

Nevertheless, all these issues are still open to discussion and should be agreed in the upcoming meetings, as they generate divergent opinions and directly impact not only on how REDD will be included in a future regime, but also what are and how activities within this scheme could be implemented.

REDD AND INDIGENOUS PEOPLES AND LOCAL COMMUNITIES

Another topic of great relevance on the REDD debate is the importance of guaranteeing the rights of indigenous peoples and local communities. The main critique of REDD is that it has the potential to expel various forest peoples from their traditional lands (Griffiths and Martone, 2009). The Bali Road Map states that guaranteeing the rights of forest peoples is critical to REDD initiatives. However, it is essential that REDD initiatives go beyond merely respecting their rights and also guarantee that projects do not harm forest communities, or undermine the central role they play in forest conservation. Therefore, REDD-related activities must respect the legal land use and access rights of resident populations. Moreover, the design and implementation of REDD initiatives should take into account the diverse cultural practices, values and traditional production systems of forest peoples.

It is important to safeguard the active involvement of forest peoples as they have the right to free, prior, and informed consent (Griffiths and Martone, 2009). Such consent implies the participation



of indigenous peoples and local communities in all phases of the design, implementation and monitoring of REDD initiatives. Furthermore, the ultimate success of these initiatives relays on all the stakeholders involved having a clear understanding of their respective roles and responsibilities as well as the potential risks associated with their participation.

Another issue of critical importance concerns the equitable sharing of the benefits generated by REDD initiatives. In order to guarantee that a fair share of benefits resulting from carbon transactions gets to the communities involved in the project that generated them, REDD initiatives must establish a transparent mechanism for allocating benefits among the various stakeholders.

By ensuring that REDD projects do not threaten the rights of forest peoples as guaranteed by the UN Declaration on the Rights of Indigenous Peoples, these initiatives represent an enormous opportunity to recognize the important role of indigenous peoples and local communities in forest conservation worldwide (Moreira *et al* 2009).

THE VOLUNTARY CARBON MARKETS

The negotiations within the UNFCCC are long and complex and the framework for structuring a REDD mechanism will probably still not be completely agreed during COP15 (December, 2009). However, some positive signs shown by the Convention have been well received by various private sector and government stakeholders who wants to anticipate the establishment of a possible market for REDD by implementing pilot initiatives.

In this sense, voluntary and independent initiatives for developing REDD projects and activities are emerging in parallel to the carbon market created by the Clean Development Mechanism (CDM).

This new market, called “voluntary market,” it is not tied to mandatory country targets and has been growing at a fast pace over the last 3 years. The volume of credits traded increased 64% between the years 2006 and 2007, and more than 89% between 2007 and 2008.

These facts reveal that the financial volume traded has seen a very significant increase, trading seven times more volume in 2008 than the amount negotiated in 2006.

Table 01 Volume of annual trading, by market type (in millions of dollars)

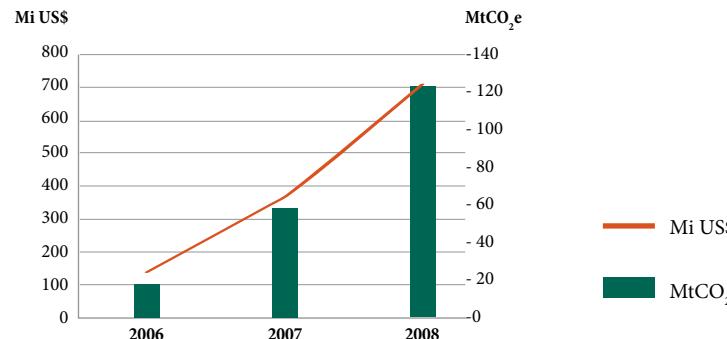
	2006	2007	2008
Voluntary	96.7	335	705
Regulated	31,051	63,710	119,483.4
Total	31,147.7	64,045.0	120,188.4

Table 02 Volume of annual trading, by market type (in MtCO₂e)

	2006	2007	2008
Voluntary	96.7	335	705
Regulated	31,051	63,710	119,483.4
Total	31,147.7	64,045.0	120,188.4

Source: Hamilton *et al*, 2009

Figure 02 Growth of voluntary market between 2006 and 2008



These initial REDD projects were conceived primarily through bilateral agreements and independently validated methodologies, which permits their immediate implementation and begins to outline the formation of a voluntary carbon market for REDD activities. This casebook analyzes the “state of the art” for projects which fit this profile in Latin America.

Following the logic of the CDM and existing pilot REDD projects, the development of projects ought to adopt methodologies focused on the quantification and monitoring of carbon credits, presenting them as a Project Design Document (PDD). As a way to lend credibility to this process, many projects have opted to submit themselves to analysis through an independent validation process.

These standards include the *Voluntary Carbon Standards* (VCS)¹⁸, with a primary focus related to calculating carbon and methodological questions; and the *Climate, Community and Biodiversity Standards* (CCB Standards)¹⁹, which verify the positive impacts of the project also in terms of co-benefits – related to positive impacts on communities and biodiversity.

There is also PlanVivo, a series of standards, processes and tools used to develop and register payment for environmental services in developing countries and that includes activities related to afforestation, agroforestry, conservation and forest restoration and avoided deforestation, implemented by small-scale landowners or communities.

Within the strategies for supporting these demonstration activities, there are many emerging initiatives for financing the reduction of deforestation in tropical countries, and which serve as indicators of the tendency to channel resources towards REDD activities. Some of these most relevant initiatives are:

- **“Forest Carbon Partnership Facility – FCPF”** created by the World Bank, with a budget of US\$300 million to assist in the preparation and development of REDD systems in tropical countries that voluntarily choose to take part in this program: (<http://www森林碳伙伴关系.org>).
- **“Norwegian Initiative for Climate and Forests”**: The country is willing to spend up to 3 billion NOK (around US\$600 million) annually in order to promote effective CO₂ reductions in developing countries. With the objective of providing useful data for a new forest carbon regime post-2012, Norway has come to develop direct cooperation with relevant international organizations, including UN agencies, host countries and other donor countries. In Brazil, the country committed to donating US\$1 billion to the Amazon Fund, with the purpose of reducing and combating deforestation. Recently the country pledged US\$250 million to Guyana, for the establishment of the Guyana REDD+ Investment Fund (<http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-.html?id=548491>).
- **“Prince Charles’ Rainforest Project”**: This initiative aims to review, create and propose practical mechanisms which recognize the real value of ecosystem services provided by the world’s remaining tropical forests through the use of financial resources to secure and guarantee the sustainable livelihood of forest inhabitants. The program will also monitor deforestation rates, influences climate change policy and creates alternatives for the production of commodities directly related to deforestation, such as beef, soy and palm oil (<http://www.rainforestssos.org>).
- **Chicago Climate Exchange**: Another existing platform is the Chicago Climate Exchange (CCE), which transacts not only forest credits, but those from other sectors and has large participation from the private sector, with large member companies such as Rolls Royce, Sony, Aracruz, Klabin and others as members.
- **BioCarbon Fund**: It is a public/private initiative administered by the World Bank that aims to deliver cost-effective emission reductions, while promoting biodiversity conservation and poverty alleviation. The BioCF provides carbon finance for projects that sequester or conserve greenhouse gases in forests, agro- and other ecosystems. The BioCarbon Fund tests and demonstrates how LULUCF activities can generate high-quality emission reductions (ERs) with environmental and livelihood benefits that can be measured, monitored and certified.

PART 2

SUMMARY OF

REDD PROJECTS

IN LATIN AMERICA

HOW TO READ THE PROJECTS

To present and compare the REDD projects mapped in this casebook, the most relevant technical and methodological aspects of each project are represented by icons. The detailed discussions about options and implications of each approach is presented at the first part of this book. The following icons will be presented in all projects.

PROJECT STATUS

Demonstrates the current status of the project and/or if it is under validation or was already validated on specific standard, or if the generated credits are already sold.



Design



Implementation



Under validation



Validated



Sale of VERs

SCALE

Indicates the implementation scale of the project/initiative.



Subnational, as happens in most of the projects



National scale, as in the case of SocioBosque project

NET EMISSION REDUCTIONS

Indicates the expected amount of emissions reductions that will be generated by the project activities on a certain period of time. It's necessary to stress that, in many projects that are still in design phase, these numbers can be very preliminary and may change in the future.



FUNDING SCHEME

Indicates what is the financial strategy that will be adopted to provide funds to implement the project activities. Are divided into two categories²⁰:



Market-mechanism, which means that the project is trading, or intend to trade its emission reductions in the carbon markets for offsetting GHG emissions



Funds based on voluntary donations, not related to the generation of offsets and not linked to any market

PROJECT'S PROPOSER INSTITUTION

Indicates the nature of the proponent or leading institution, which means, institution that holds the rights over the generated REDD credits and will be the main responsible for implementing the project activities.

.GOV

Government

.ORG

NGO

.EDU

Research institution

.COM

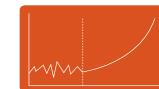
Private sector

BASELINE

Indicates which baseline approach was adopted by the project to quantify its emission reductions:



Historical baseline, considering average deforestation rates in a determined reference period, projecting it linearly to the future,



Modelled or Projected baseline, developed based on a land cover change model that generates future deforestation, based on the analysis of specific socioeconomic agents and drivers.

CO-BENEFITS

Apart from the climate benefits generated by emissions reductions, other environmental and social benefits are also generated from REDD projects.



Conservation of biodiversity



Improvement of quality life for communities



Conservation of watershed



Recovery of riparian forests

COUNTRIES' PROFILE OF FOREST COVER

		Forest cover	Annual rate forest loss
HFLD	Highest forest cover, low rate of deforestation	85-100%	0-0.1%
HFMD	High forest cover, medium rate of deforestation	50-85%	0.4-0.8%
HFHD	High forest cover, high rate of deforestation	50-95%	0.8-1.5%
MFMD	Medium forest cover, medium rate of deforestation	35-50%	0.3-0.8%
LFLD	Low forest cover, low rate of deforestation	1-35%	0-0.3%

²⁰ Please note that this item refers only to the credits, the initial funding for readiness activities is not considered in these analyses.

BOLIVIA

The objective of the project is to incorporate forest areas adjacent to the existing Noel Kempff Mercado Park, that are threatened by forest concessions and un-planned deforestation and guarantee its effective conservation. The Project is located in San Inacio, in the state of Santa Cruz, Bolivia. The project area has 642,184 hectares, located in a transition area between the Chiquitana Dry Forest and the Amazon.

National deforestation rate: 0,5 % – HFMD

Project's deforestation rate: N/A



The project is administered by Friends of Nature Foundation – FAN (*Fundación Amigos de la Naturaleza*, in Spanish), with TNC as their primary partner (responsible for project design and resource administration) and the Government of Bolivia (partner), American Electric Power (AEP), BP America and PacifiCorp as investors. FAN and Winrock International were responsible for carbon accounting.

The project was validated by *Societé Generale de Surveillance*, based on CDM directives for A/R projects.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE



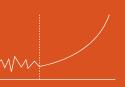
For the calculations of the REDD baseline future deforestation projections were calculated using the GEOMOD model, which utilizes historical data to project the quantity and location of deforestation. This baseline will be revised every 5 years to correct possible incoherencies.



ADDITIONALITY

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In the absence of the project, forest exploitation would continue in the area of forest concessions and deforestation would extend to new lands and communities without land titles. Financially, the Government of Bolivia would be unable to compensate the forest concessions with appropriate resources and thus expand the park. In addition, carbon sequestration is less financially attractive than forest exploitation activities. In this way the resources derived from carbon were the only possibility for ensuring that the area would be preserved and the reserve effectively implemented.



LEAKAGE



The major risk of leakage in the short term would involve the expansion of subsistence agricultural activities by communities living on the extended border of the park. In order to address this, community development activities, educational campaigns, land titling and tenure assistance and an ancestral lands management plan were implemented. In addition, an area of 360, 565 hectares were designated

as "ancestral indigenous territory", thereby guaranteeing the appropriate land tenure rights. A buffer area was also established around the area to monitor possible leakage.

PERMANENCE

The strategy adopted is the effective protection of the park through the National Service for Protected Areas – SERNAP (*Serviço Nacional de Áreas Protegidas*, in Portuguese) and FAN Bolivia. PAC-NK provides the necessary finances and structure to guarantee this protection.

MONITORING

Deforestation and biomass dynamics are monitored, as well as socio-economic impacts, the development of markets of wood products and the risks of leakage and forest fires. Those activities are performed by FAN-Bolivia.

COSTS AND FINANCING

Design, Implementation and Maintenance: US\$ 11,5 million over 1997 to 2006.

Funding Sources: The three companies (AEP, BP America and PacifiCorp), and TNC invested a total of US\$10,850,000. A part of these funds are destined for project programs and another part to a fiduciary fund.

Financial Return: (N/A)

DESTINATION OF CARBON CREDITS

The carbon credits that correspond to the Bolivian Government (49% of total) were not commercialized yet and the other 51% were given to the investors (AEP, BP and PacifiCorp).

INTEGRATION TO NATIONAL REDD POLICIES

The Bolivian REDD strategy at the national level is still under construction, thus dialogues to determine how both proposals will be integrated are not yet established.

PRIMARY CHALLENGES

During design and implementation many "legal holes" were discovered in terms of the sale of carbon credits and their implications on taxation. This has slowed some processes for implementing the project and distributing its benefits to the communities.



BRAZIL



The project seeks to add value to the standing forests of Acre and turn them into a viable source of environmental services for current and future generations of the people from the State of Acre, the Amazon and the Planet. In its initial stage, the project will span 8 municipalities in the State of Acre, totaling 5,800,000 ha in diverse regions and a mix of Amazon forest types.

In the first stage of the project, priority areas have been defined, being those under greatest threat of deforestation and which surround diverse ownerships and tenure (indigenous lands, protected areas, informal settlements, etc.). These areas were selected in order to orient the investment of initial financial resources.

The project, proposed and coordinated by the Acre State Government, in partnership with WWF Brazil, the IUCN, GTZ and IPAM, foresees a Payment for Ecosystem Services Program, including the compensation for reduced emissions from deforestation and forest degradation, sustainable management and conservation of forests (REDD+) – by calculating their carbon percentage.

National deforestation rate: 0,6% – HFMD

Project's deforestation rate: 0,42%



STRATEGIES ADOPTED BY THE PROJECT

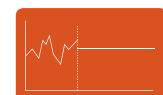
BASELINE



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ADDITIONALITY

The criteria for demonstrating the projects additionality are currently being elaborated by the project's proponents.



LEAKAGE

Deforestation rates statewide will be monitored and part of those credits will be flagged as insurance in the case of possible leakage.



PERMANENCE

The strategy is based on restructuring production systems on private properties, intensifying and increasing the productivity of deforested areas and using forests in a sustainable manner, guaranteeing their existence and continuous provision of environmental services. The project recognizes that the generation of sustainable

incomes together with improvements in the command and control system increases the chances of guaranteeing the forests existence, once conservation and forest management are consolidated as the property's primary economy.

MONITORING

For the monitoring of deforestation, remote systems based on the Prodes method and Landsat images will be utilized by INPE and the Acre State Central Geoprocessing Center (*Unidade Central de Geoprocessamento do Estado do Acre*, in Portuguese).

COSTS AND FINANCING

Design, pre-implementation and validation: US\$ 588,000²¹

Implementation: US\$ 294 million for the next 15 years

Funding Sources: Preparation: Own resources and WWF, GTZ

Implementation: Amazon Fund (under negotiation), British Sky TV, among others.

Financial Return: Not yet defined

DESTINATION OF CARBON CREDITS

Strategy not yet defined, but sale in carbon market is predicted.

INTEGRATION TO NATIONAL REDD POLICIES

The project is consistent with the baseline methodology utilized by the Federal Government and with the State Prevention and Control of Deforestation Plan.

PRIMARY CHALLENGES

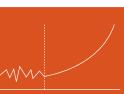
Large scale certification and fundraising for project costs.

Implementation of a transparent and effective governance system.

²¹ The project provided values originally in Reais, which have been converted to Dollars with an exchange rate of US\$ 1 = R\$ 1.7.



BRAZIL

National deforestation
rate: 0,6 % – HFMDProject's
deforestation rate: 0,84%

The project's objective is the conservation and restoration of an Amazon forest area that belonged to a timber company before the purchase of the property by the project owners. The project is located in the municipality of Breves, on the island of Marajó, northern Pará State. The total project area is 94,171 hectares, within a private property pertaining to the company Ecomapuá Conservação LTDA. The dominant vegetation is Amazon forest, divided between dense forest and ombrophilous alluvial forest.

In addition to the REDD component, proposed activities within the project's scope include reforestation as well as research and the development of relations with surrounding communities.

The project was made possible through a partnership between Ecomapuá Conservação LTDA, the project implementer; Winrock International, responsible for the project's feasibility study; Bruno Matta, independent consultant, responsible for designing the PDD for CCB standards; the University of Georgia, responsible for soil carbon measurements; Vigna Brasil, responsible for research and planning for reforestation and low-impact management; the Amazon Sustainable Institute, responsible for social aspects of the project.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The baseline is currently under construction and will use a model based on modules in the "REDD methodology Framework" Version 1.0 – April 2009²²: "Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation".

ADDITIONALITY

The analysis of the project's additionality was done through the establishment of scenarios of likely land uses in the absence of the project. The first step was the identification of alternative land use scenarios for REDD activities, together with an analysis of investments to determine if the project scenario would be less economically attractive compared with other scenarios. In the absence of the project, the continuation of deforestation activities promulgated by the agents and drivers of deforestation could be expected.

LEAKAGE

The project hypothesizes that the primary source of leakage could potentially be the displacement of external agents to other areas. Thus, the April 2009 REDD Methodology Framework, Version 1.0 will be used to estimate these potential

emissions from activity shifting of unplanned deforestation, currently in the process of validation at the Voluntary Carbon Standards (VCS).

PERMANENCE

Shall be secured through the project monitoring plan, which foresees regulatory and oversight actions as well as the development of economic activities together with surrounding communities. In addition, a buffer will be created to hold from 20-40% of generated Verified Emissions Reductions (VERs) from sales in order to compensate for any non-permanence of credits.

MONITORING

Shall be accomplished based on the "REDD Methodology Framework" version 1.0²², currently in process of validation in Voluntary Carbon Standards – VCS. Shall be realized by Sustainable Amazon Institute – IAS (*Instituto Amazônia Sustentável*, in Portuguese).

COSTS AND FINANCING

Implementation: Preliminary estimated costs are US\$ 12.5²³ per hectare, on a total of US\$ 23.6 million

Funding Sources: Own finances for preparation

Financial Return: (N/A)

DESTINATION OF CARBON CREDITS

The project aims to sell REDD credits to private sector in the carbon markets.

INTEGRATION TO NATIONAL REDD POLICIES

The project is integrated with the Brazilian national strategy for environmental policy in the Amazon as it strives to reduce deforestation and conserve biodiversity. The project is the fruit of a private and voluntary initiative of Ecomapuá Conservação LTDA in partnership with IAS.

PRIMARY CHALLENGES

The effective involvement of local communities in the activities and benefits derived from the project, not to mention their orientation and awareness-raising as to the conservation and sustainable use of biodiversity.

²² Available at www.netinform.net/KE/files/pdf/1_REDDE-MF%20REDD%20methodology%20framework%20v1.1.pdf | ²³ The project provided values originally in Reais, which have been converted to Dollars with an exchange rate of US\$ 1 = R\$ 1.7.



BRAZIL

National deforestation
rate: 0,6% - HFMDProject's
deforestation rate: 0,67%

STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The creation of the baseline scenario was accomplished using a model developed through the use of GIS tools, due to the difficulty in using linear projections (average historical deforestation) to explain the drivers and dynamics of deforestation in the state of Tocantins, particularly around the city of Palmas.



ADDITIONALITY

In the absence of the project, the status quo scenario would persist- subsistence agriculture, the unsustainable use of natural resources and the development of ranching using rudimentary practices such as fire. The project will catalyze a shift in the tendency to maintain unsustainable natural resource practices and the use of crude practices such as slashing and burning.



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LEAKAGE

It is not expected that the agents currently responsible for deforestation will migrate to areas defined within the “leakage belt” established by the project. It is anticipated that with local communities’ adoption of the project’s proposed activities, that “positive leakage” will be generated, in other words, the “leakage belt” can come to obstruct deforestation and degradation tendencies beyond the boundaries of the project.



PERMANENCE

The permanence of credits will be guaranteed through the creation, by law, of a Privately Owned Nature Preserve (RPPN), which prohibits land cover changes in the area. Besides the guarantees from legal mechanisms, 20% of the total VERs

generated by the project will be reserved in contingency while project validation and monitoring are in process in order to cover any leakage or accidental loss of credits by the project (non-permanence).

ADDITIONAL BENEFITS

Decrease in the use of fire, which will result in fewer respiratory illnesses that threaten local quality of life. Preservation of areas considered biodiversity “hotspots”.

MONITORING

All proposed project activities will use the tool “Metodologia Carbono Social²⁴” (Social Carbon Methodology). With these tools it will be possible to create a series of indicators applicable to the monitoring of project activities, which also involves the monitoring of deforestation.

COSTS AND FINANCING

Not available

DESTINATION OF CARBON CREDITS

The credits shall be sold to Hyundai Motors America (HMA). Figures related to the transactions are not available.

INTEGRATION TO NATIONAL REDD POLICIES

The Government of the State of Tocantins is aware and agrees with the development of the project, which is consistent with the State Environmental Policy (Lei n.261, 1991) and the State Policy for Climate Change (Lei n.1917, 2008). The Secretaria de Desenvolvimento Agrário (Secretary of Agricultural Development) also confirms that the ownership of the project’s credits belong to project developers.

PRIMARY CHALLENGES

The Brazilian Government has not adopted a national REDD system for the cerrado (savannah). Thus, the Genesis REDD project has had to use its own independent means for estimating future deforestation and quantifying carbon stocks and subsequent emissions.

Another challenge was establishing a linear projection to explain the drivers and dynamics of deforestation in the state of Tocantins.



BRAZIL



National deforestation rate: 0,6 % - HFMD

Project's deforestation rate: 4,8 %



The project involves a group of 350 families of rural producers that live in 15 settlement projects on the margins of the Transamazon Highway (BR-230) between the cities of Senador José Porfírio, Pacajá and Anapú, in western Para State. The total project area is 31,745 hectares.

The project's objective is to transform the historic model of development for rural properties in the region, currently based on slash and burn agriculture with low productivity and minimal value added production, into a model that primarily involves improvements in agricultural and ranching practices through technical assistance, production technologies and infrastructure, increasing family incomes and decreasing pressures for new deforestation. This project is currently under review at the Amazon Fund.

The project was developed through a partnership between the Amazon Institute for Environmental Research – Ipam (*Instituto de Pesquisa Ambiental da Amazônia*, in Portuguese) and the Foundation Live, Produce, Preserve (*Viver, Produzir e Preservar*, in Portuguese also), responsible for the planning and execution of Project activities and the Biodiversity Fund – FUNBIO (*Fundo para a Biodiversidade*, in Portuguese), which will serve to administer resources captured by the Project.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The baseline scenario was established taking into account historical rates of deforestation in the project region, demarcated within the limits of the “Pólo do Proambiente da Transamazônica” (Proambiente Hubs of the Transamazon, see glossary). For the calculation of baseline deforestation rates, average deforestation rates in the region between 1998 and 2009 were used.²⁵



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ADDITIONALITY

In the absence of the project, the probable scenario would be the continuation of current practices of families residing in the region, such as low-yielding slash and burn agriculture, which requires the constant opening of new forest areas. As these families do not have the financial means to alter their production methods, resources originating from the REDD project are the only way to guarantee that these families have access to capacity-building, technical assistance and the infrastructure which allows them to realize true forest conservation and the sustainable use of their lands.



LEAKAGE

Being a pilot project involving only 350 families, the project's scale is inadequate to consider leakage.

PERMANENCE

The change of production systems and adoption of more sustainable practices is the primary strategy to guarantee that these forests will remain conserved. In addition, a local fund will be created for the project which will manage common resources (transition investments) and will serve to distribute resources to each family relative to the size of standing forest on each property (based on their opportunity costs). The Fund also has the potential to leverage additional resources for the continuation of the project beyond the initial 10 years, including the potential to expand the project beyond these 350 families.

MONITORING

Monitoring of forested areas will be accomplished via satellite images and field visits by project participants. Socio-economic monitoring will be accomplished through the “Índice de Sustentabilidade do Polo do ProAmbiente da Transamazônica²⁶” (Sustainability Index for ProAmbiente Hubs of the Transamazon).

COSTS AND FINANCING

Payment for opportunity costs: R\$13,123,437 to the 350 families, which represents an average of R\$182/ha/year, totaling R\$37,495 for each family annually.

Transitional investments: R\$15.734.206 to change the regional development model.

Total costs: The project's total costs, considering administrative costs, are estimated at R\$33,940,498

The cost of the projects CO₂ tonnage (relation between project costs and volume of emissions reductions generated) is nearly R\$10.8 (approximately US\$4.92)

Funding Sources: Amazon Fund (in negotiation)

DESTINATION OF CARBON CREDITS

As the project is directed toward the Amazon Fund, no credits will be generated for sale in the private sector.

INTEGRATION TO NATIONAL REDD POLICIES

The project was created specifically to be submitted to the Amazon Fund and as such fits directly into the objectives of a national system.

PRIMARY CHALLENGES

Not available.

²⁵ The year 2001 was excluded from calculations as there was an abnormally high average deforestation rate. | ²⁶ To monitor the impact of the REDD project on communities, a list of sustainability indicators was created in the manner of the Índice de Sustentabilidade do Pólo do ProAmbiente da Transamazônica (Sustainability Index for ProAmbiente Hubs of the Transamazon). These indicators should be applied annually for all families involved in the project and reviewed annually. Among them are improvements in income, health, access to transportation, education, food security and other relevant indicators.

BRAZIL

National deforestation rate: 0,6 % - HFMD

Project's deforestation rate: 1,41 %



The project consists of the creation and implementation of a Sustainable Development Reserve, to contain deforestation on a region under strong pressure of land use, located in the Novo Aripuanã municipality, in the south of Amazonas State, Brazil. The Juma Reserve is a state protected area with a total area of 589,612 hectares, comprised of Amazon forest exhibiting three different forest typologies.

The project implementers are the Amazonas Sustainable Foundation – FAS (*Fundação Amazonas Sustentável*, in Portuguese) and the State Government of Amazonas, which has the responsibility of coordinating and implementing the project's proposed activities as well as their management; the Marriott Hotel chain, who is responsible for the financing and purchase of REDD credits – that will be used to offset their carbon emissions; and the Institute for Conservation and Sustainable Development of Amazonas (Idesam), technical partner responsible for coordinating the drafting of the Project Design Document (PDD) and the CCB validation process. The project is validated under the CCB Standards and in validation under the VCS.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The project used the SimAmazonia²⁷ to project the baseline scenario predicted for the next 44 years. This model incorporates presumptions such as population growth, construction of infrastructures and other parameters to estimate future deforestation rates for the project area. It is worth noting that the primary driver of deforestation is the paving of existing roads for improved access, and in this context this project is located between interstate BR-319 and BR-230, and is crossed by highway AM-174. The future paving of these highways will likely increase deforestation pressure on the project area.

ADDITIONALITY

The financial benefits from carbon credits sale were strongly considered in the decision to create the Juma Reserve, being they indispensable for the continuation of the project. Without these benefits, it would not be possible to create and effectively implement the Juma Reserve.

LEAKAGE

No negative impacts are expected on carbon stocks outside the project area, once strategies are adopted to avoid population migration and land use changes. In fact, the project's implementation is hoped to generate "positive leakage", once it predicts to take actions to reduce deforestation also outside the project boundaries (area surrounding the Reserve).

PERMANENCE

A buffer of credits (10%) was established according to the methodology guidance provided by VCS. In addition, a permanent fund will be established with the objective of guaranteeing the necessary flow of resources to assure the implementation of the project even after the end of the crediting period.

MONITORING

The monitoring plan will contemplate deforestation, carbon stocks and dynamics, baseline scenario, biodiversity and the socio-environmental and socio-economic conditions of communities. To accomplish this, it will be carried out satellite tracking and in-field investigations and assessments.

COSTS AND FINANCING

Design, pre-implementation and validation: US\$2 million

Implementation: US\$500,000/year (2009-2011)

Maintenance: US\$24 million

Funding Sources: Contributions from Marriott guests

Financial Return: The resources generated will be entirely directed to the project's implementation. The returns may be variable, as they are subject to the guests' contribution.

DESTINATION OF CARBON CREDITS

The credits will be sold to the Marriott chain of hotels, which will use them to offset the emissions of guests that contribute voluntarily to the program.

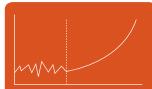
INTEGRATION TO NATIONAL REDD POLICIES

The National Climate Change Program predicts a 40% reduction of deforestation in the Amazon by the end of 2009, based on deforestation rates in the period between 1996 and 2005. The intention is that from 2010- 2013 another 30% of deforestation will be reduced relative to 2006- 2009 rates and by 2017 another 30% will be reduced over the previous four years. Recently the Federal Government announced its intention to reduce deforestation by 80% by 2020. The Juma Project intends to contribute to these reduction targets, and generate lessons learned that can be replicated in other areas such as MRV (monitoring, reporting and verification), distribution of benefits, community involvement, etc.

PRIMARY CHALLENGES

Being the first project of its kind in Brazil, the major challenges have been how to establish a baseline, define the limits of the project, estimate carbon stocks and define monitoring strategies.

In the implementation stage, the major challenges are related to the efficient allocation of resources, considering logistical difficulties and adjusting the project to local realities.

**BRAZIL**National deforestation
rate: 0,6 % - HFMDProject's
deforestation rate: 0,09 %40 years
384,264 tCO₂e
9,607 tCO₂/yr.ORG
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This is a collection of three projects that takes place in different Atlantic rainforest locations in the municipalities of Antonina and Guaraqueçaba, in the State of Paraná, in southern Brazil. These areas are very close to each other and their projects share a similar logic. As each “project” has different investors and separate accounting for emissions reductions, the general concept for implementing the project will be presented as a group and specific details of each project presented separately.

Atlantic Rainforest Conservation Project

Area: 8,600 hectares, within the municipality of Antonina

Emission reductions of 181,095 tCO₂e in 40 years (between 2001 and 2041).

Financed by the American company General Motors

Pilot Project for Reforestation in Antonina

Area: 3,300 hectares, within the municipality of Antonina

Emission reductions of 65,456 tCO₂e in 40 years (between 2002 and 2042).

Financed by the American company Chevron

Action Project against Global Warming in Guaraqueçaba

Area: 6,700 hectares, within the municipality of Guaraqueçaba.

Emission reductions of 137,713 tCO₂e in 40 years (between 2000 and 2040).

Financed by the American company Electric Power

The objective of the project was to transform areas originally used for raising buffalo into Privately Owned Nature Preserves (RPPN, see glossary), and implement reforestation, protection and enforcement measures against land grabs and impacts from external activities, as well as degradation caused by the buffaloes in primary forests. All of the areas are private, pertaining to the NGO Society for Wildlife Research and Environmental Education – SPVS (*Sociedade de Proteção à Vida Silvestre e Educação Ambiental*, in Portuguese). The Nature Conservancy provides technical and accounting assistance.

STRATEGIES ADOPTED BY THE PROJECT**BASELINE**

Generated from the deforestation projection model GEOMOD²⁸. A multi-temporal study was also done to verify the historical evolution of deforestation in each type of vegetation.

ADDITIONALITY

The forests, which before the beginning of the project were private ranches for raising buffalo, faced constant deforestation pressures by their very owners and degradation from the advance of the buffaloes into the forest. Besides this, numerous cases of illegal extraction of palm heart and wood were occurring by people outside of the project. The acquisition and transformation of the area into an RPPN establishes a perpetual commitment to conservation on the part of the new owners. The resources invested by companies in exchange

for carbon credits was the only way to guarantee the purchase and effective implementation of planned conservation activities.

LEAKAGE

The primary deforestation risk was if the owners sold the areas and used the sale profits to buy another one for a new buffalo herd. The strategy employed to handle this problem was to purchase the ranches together with the herd, to avoid having these transferred to other areas, and monitor the ex-property owners during a certain period of time to guarantee that they do not purchase other areas and engage in activities that result in deforestation. In addition, the areas surrounding the project are monitored and all instances of deforestation are reviewed to guarantee that no direct relation exists to the project.

PERMANENCE

From the moment the areas became a RPPN, a legal obligation was created for the property owner to guarantee its perpetual conservation. Besides this obligation, the implementation of enforcement and protection programs helps to guarantee that these forests remain standing. There is no risk of wildfires, as these areas have extremely high precipitation levels and there are no existing records of fires in the region. The establishment of a permanent fund is another measure that guarantees the implementation of project activities over the next 40 years.

MONITORING

Accomplished through oversight of the areas and work with the communities.

COSTS AND FINANCING

Development and implementation: The project received an initial investment of US\$18 million from the purchase of carbon by the three companies. Of these, 30% were used for the purchase of properties and the remainder is retained in a permanent fund which will guarantee the maintenance of the project for 40 years.

DESTINATION OF CARBON CREDITS

All of the carbon belongs to the buyers in the respective areas where their investments were made.

INTEGRATION TO NATIONAL REDD POLICIES

The project was elaborated well before international and national discussions of REDD and as such the relationship with the national policy is not clear.

PRIMARY CHALLENGES

The maintenance of areas destined for conservation and the collaborative work with the communities have proven to be a challenge.

²⁸ GeoMod is a land cover simulation model, implemented on Idrisi, a SIG software developed by Clark University (Pontius et al., 2001; Brown et al., 2007). It is a model based on grids that predicts the transition from one class of land cover to another, for example, the location of grid cells that transfer over time from class 1 to class 2. In this way, GeoMod can be used to predict areas that may possibly pass from a forest (class 1) to a non-forest (class 2) (deforestation) in a given period of time.

SURUÍ PROJECT



BRAZIL



National deforestation
rate: 0,6 % – HFMD

Project's
deforestation rate: 0,37 %



The project consists of protecting an indigenous territory which is currently under great threat of deforestation from land grabbing and illegal logging. The project is located in the Indigenous Territory Sete de Setembro, located in the municipalities of Cacoal and Espigão d'Oeste in Rondonia State and Rondolândia in Mato Grosso State. The total area is 248,000 hectares divided between submontane open ombrophilous and submontane dense ombrophilous forests.

The project is being developed by the Metareilá Association, the proponent of the project who supports and enforces its activities and who realizes the transfer of resources to the Paiter-Suruí people; in partnership with Kanindé, a NGO which is responsible for the elaboration of the ethnic zoning, technical assistance and the reforestation plan; Forest Trends, which provides technical support in the formulation and implementation of the project, legal advice and capacity-building for environmental services and contact with investors; the Institute for Conservation and Sustainable Development of Amazonas (Idesam), responsible for the construction of baseline scenario and quantifying carbon emissions reductions; ACT-Brazil who is responsible for building the project's participatory processes, legal advice to Metareilá and anthropological support to the project as well as development of the GIS database.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE

In the “business as usual” scenario, a significant portion of the indigenous territory would be deforested for productive activities (e.g. illegal logging and agriculture) by local producers and farmers in partnership with the indigenous populations. To demonstrate how this dynamic would play out, a specific model would be used to project future deforestation, considering the influence of the primary drivers of deforestation within the project area the preliminary calculations were made using the SIMAMAZONIA model.

ADDITIONALITY

Under current conditions forest conservation is less economically attractive than other land uses. Without carbon credits, it would become increasingly difficult for the Suruí people to protect their forests and avoid their conversion to other land uses. Thus, financial resources generated by credits would be invested in the establishment of viable economic alternatives based on sustainable agroforestry systems in combination with other complimentary options for income generation that are being proposed by the project.

LEAKAGE

The approaches to deal with leakage are still being defined. Leakage caused by changes in community activities will be monitored within a leakage belt, and activities will be designed on a way to mitigate this risk, such as alternative forest and agricultural production activities.

PERMANENCE

The project will handle risks that threaten its permanence by designing a solid and participatory project, a long-term financing mechanism based on a permanent fund and investments into alternative and sustainable income generating activities over the long term. These activities are part of a 50-year plan that the Suruí created to guide their development. Besides this, a portion of the credits will be set aside from sale, based on analysis of risk parameters by Voluntary Carbon Standards (VCS).

ADDITIONAL BENEFITS

Reforestation and recovery of degraded areas and valuation of indigenous culture.

MONITORING

Will be accomplished in collaboration with local communities, using a combination of satellite imagery and data analysis of carbon stocks, as well as the publicly available PRODES²⁹ system. In addition, social and biodiversity monitoring based on community monitoring will be carried out with contributions from partner institutions.

COSTS AND FINANCING

Development: Approximately US\$250,000

Implementation: Not yet defined

Funding Sources: The project's design is funded from donations by philanthropic organizations

Financial Return: Not yet defined

DESTINATION OF CARBON CREDITS

Not yet defined, but probably the credits will be sold in the voluntary carbon market.

INTEGRATION TO NATIONAL REDD POLICIES

There is no direct connection with the national REDD system. However, if the national REDD system that comes to be implemented in Brazil accounts for demarcated indigenous territories, which span 15% of the nation's territory, and considering that 99% of these are located in the Amazon region, this project will come to have a direct relation to the national strategy.

PRIMARY CHALLENGES

One of the primary challenges encountered by the project is the existing uncertainties about the rights of indigenous people to develop carbon projects, sell them and receive REDD benefits directly. It is also a challenge to design a baseline that adequately reflects future pressures on the Suruí people, as their historical rates of deforestation are low, but likely would not remain so in the future. Other challenging questions were how to deal with questions of leakage and the limited institutional capacity of the project proponent (Metareilá Association of the Suruí People).

SOCIOBOSQUE PROGRAM



ECUADOR



The SocioBosque Program (SBP) is an initiative of the Government of Ecuador to conserve its natural forests and improve the quality of life of its communities. The project spans the entire national territory with a conservation goal of 4 million hectares of forested area, accomplished through financial incentives for land owners and communities that voluntarily join the program.

The project is implemented by the Secretary of the Environment of Ecuador. A number of memorandums of understanding (cooperation agreements) were signed between PSB and various NGO's in order to execute the project. In accordance with these agreements, NGO's will facilitate the process of inclusion of project beneficiaries, in coordination with the Environment Secretary.

STRATEGIES ADOPTED BY THE PROJECT



BASELINE

The baseline scenario was defined considering Ecuador's average historical deforestation rates from past years and project it linearly over the next seven years, which corresponds to a loss of 198,000 hectares per year. Preliminary calculations estimate a potential reduction in emissions of approximately 190 million tons of CO₂ in 7 years from the beginning of the project.



ADDITIONALITY

Information not available.



LEAKAGE

Information not available.



PERMANENCE

There are no predicted discounts in the case of forest loss, but only a sanction mechanism enacted for non-compliance with the agreement.



MONITORING

The reductions will be monitored by the Secretary of the Environment, through the implementation of a greenhouse gas monitoring system, following LULUCF guidelines applied only to the forest sector. In addition, the state of forest cover will be monitored through remote sensing and random field visits.



COSTS AND FINANCING

Design and implementation: Between US\$ 80 and 100 million per year, to implement the program.

Funding Sources: Governmental resources.

The amount paid to each individual landowner or community could reach a maximum of \$30/ha/year, transferred twice a year and enacted over a 20-year agreement.

DESTINATION OF CARBON CREDITS

There are no generations of credits yet, and the project is currently financed by the government only. The idea is to work to make the PSB compatible with a future international REDD mechanism.

INTEGRATION TO NATIONAL REDD POLICIES

The program is one of the components of the national REDD strategy of Ecuador.

PRIMARY CHALLENGES

To guarantee the financial sustainability at the long term, and the constant monitoring of the properties included in the program.

More information at www.ambiente.gov.ec/paginas_espanol/sitio/index.html



GUATEMALA



National deforestation
rate: 1,4 % – MFMD

Project's
deforestation rate: 0,42 %



20 years
20 million tCO₂e
1 million tCO₂e/yr

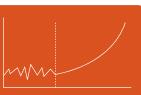
The project's objective is the implementation of a protected area that is currently under strong pressures from land use change. The Project spans an area covering 4 municipalities, located in Petén, in northern Guatemala. The project area is 600,000 hectares in the rainforest low lands of the Yucatan Peninsula.

The project is developed through a partnership with the National Council of Protected Areas, which administers the areas where the project is being developed; the Association of Forest Communities of Petén – ACOFOP (*Asociación de Comunidades Forestales de Petén*, in Spanish), responsible for the activities that seek to reduce deforestation through sustainable forest management in forest concessions; the Ministry of Environment and Natural Resources, a member of the project's coordinating commission and the UNFCCC's main contact in Guatemala; the Grêmio Association of Non-Traditional Products (*Asociación Gremial de Exportadores de Productos no Tradicionales*, in Spanish), which provides financial support for the development of the Project Design Document (PDD) and the initial stages of activities to reduce deforestation; USAID's mission in Guatemala, which provides financial support for initial project management and administration; the InterAmerican Development Bank (IDB), which provides financial support for the administration of the project and the development of legal and methodological benchmarks; and Rainforest Alliance, which acts as a technical advisor and facilitator throughout the project's development.

STRATEGIES ADOPTED BY THE PROJECT



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BASELINE

Will be constructed through Land use Change Model (LCM) that will project future dynamics of deforestation in the region. The project relies on quality historical information about deforestation in the last 20 years, which are being used as references for developing the model.

ADDITIONALITY

Additionality was assessed based on the additionality analysis tool³⁰, which identified various institutional and socio-cultural barriers to investments that goes against the forest conservation in the area in the absence of a REDD project.

LEAKAGE

The primary possible source of leakage is related to external (migrant) threats that can cause deforestation in other locations once the project is implemented. To address this problem, a baseline scenario is being built for approximately 4,000,000 ha (including the project area), which will allow for the identification of any possible leakage.

PERMANENCE

The project is proposed by groups that have a strong social foundations and organizational capacity, with experience in implementing productive activities which add value to forests, as, for example, forest management and strategies to reduce deforestation in order to guarantee the permanence of credits. In addition, a credit buffer is being planned to mitigate other possible risks.

ADDITIONAL BENEFITS

Protection of Maya archaeological sites.

MONITORING

The monitoring plan is under development.

COSTS AND FINANCING

Development (pre-implementation/validation): US\$1,000,000

Implementation: Between US\$3 million and US\$5 million annually.

Funding Sources: USAID, IDB, Gremial Exporters Association, Conselho Nacional de Áreas Protegidas (CONAP) (National Association of Protected Areas)

Financial Return: An estimate of approximately US\$5 million per year, considering the sales of the VERs price between US\$4 to US\$5 per tCO₂.

DESTINATION OF CARBON CREDITS

Negotiations have yet to take place, but there are existing possibilities both with the private sector and multilateral organizations.

INTEGRATION TO NATIONAL REDD POLICIES

The project will be built around a subnational baseline which represents 35% of the countries' territory. Currently, discussions involve how to integrate this baseline within a national baseline.

PRIMARY CHALLENGES

Establishing consensus among primary stakeholders, governments and forest managers. As there are many divergences and uncertainties, imparting a general understanding of REDD was also a challenge.



GUATEMALA



National deforestation rate: 1,4 % – MFMD

Project's deforestation rate: 0,17 %



The Sierra de Las Minas Biosphere Reserve Project is located in the municipalities of La Tinta and Purulhá, in Baja Verapaz and Alta Verapaz in central/northern Guatemala. The total project area is 102,939 ha, containing tropical rainforest and montane forests.

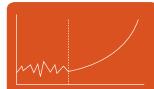
The project's objective is to generate resources to guarantee the effective implementation of a part of the reserve that is currently under great deforestation pressure. The project is located in an area of natural forests and foresees, along with forest conservation, the recovery of deforested areas, reforestation, measures to control forest fires and the implementation of other sources of sustainable income generation for the surrounding populations.

The project is developed in partnership with the National Council of Protected Areas, manager of PA's and responsible for authorizing the permanence of communities currently living in the reserve; Defenders of Nature (*Defensores de la Naturaleza*, in Spanish), a national NGO and co-manager of the area who will implement the project; Rainforest Alliance, which supports the project's design and the search for buyers of credits; TNC, which advises on the development of financial mechanisms; University of the Valley of Guatemala (*Universidad del Valle de Guatemala*, in Spanish), which provides technical assistance; and Sandia Labs Solar Foundation, which performed the analysis and updating of information about carbon stocks.

STRATEGIES ADOPTED BY THE PROJECT



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BASELINE

The project uses a projected baseline, built through a deforestation projection LCM model which is currently under development. Data on forest carbon stocks and their respective emissions will be obtained from local forest inventories.

ADDITIONALITY

The government of Guatemala is unable to provide the necessary influx of resources to guarantee enforcement of the park, which is threatened by land grabs and illegal deforestation. In addition, the surrounding communities do not receive technical assistance from the government to guarantee the necessary means for their survival. As such, the REDD project would be the only guarantee that the area will have control and enforcement, and the surrounding communities will receive not only technical assistance, but also access to other sources of sustainable incomes.

LEAKAGE

The risk of leakage consists in the activity shifting from communities that would deforest the park in the baseline, and that, being prohibited from cutting the forests in the project scenario, could migrate to deforest in outside other areas. The project intends to implement measures to stabilize the communities already living in the area, improving their quality of life and generating other income sources. A leakage monitoring plan will be implemented in the project area and in the Park's boundaries. A credit buffer will also be created, with a percentage yet to be defined.

PERMANENCE

The creation of a permanent fund has been proposed with the end of guaranteeing the necessary flow of resources for initial activities over the life of the project and possibly after its conclusion. In addition, enforcement agreements will be made with the government and the implementation of sustainable development activities together with surrounding communities.

MONITORING

The monitoring of carbon stocks and dynamics will be done through forest inventories, based on a methodology proposed by Winrock International.

COSTS AND FINANCING

Design Stage: (PIN/inventory): US\$130,000

Funding Sources: Support from institutions involved in the project

Financial Return: Currently being calculated. Once the definitive baseline scenario and carbon stocks are established, data will be generated to allow the verification and economic feasibility of the project as well as the price of carbon sales necessary for the project's viability.

DESTINATION OF CARBON CREDITS

The project has not yet arrived at this stage, but has the intention to sell its REDD credits in the voluntary carbon markets with certification under CCB and VCS.

INTEGRATION TO NATIONAL REDD POLICIES

The project was discussed and articulated with National System of Protected Areas (Government agency), and seeks to contribute to the development of political and regulatory benchmarks for REDD, still nonexistent in Guatemala.

PRIMARY CHALLENGES

Dealing with the lack of legal definition in the country and guaranteeing the necessary resources for its complete design.



GUATEMALA



National deforestation rate: 1,4 % – MFMD

Project's deforestation rate: 0,48 %



The project consists in the establishment of the Sierra del Lacandón National Park, located in the municipality of La Libertad, in Petén, northern Guatemala. The park is included in the Maya Biosphere Reserve with an area of 171,300 ha, containing Usumacinta rainforests and montane forests.

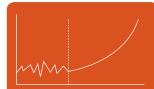
The project's objective is to generate resources to guarantee the effective implementation of the Park, which has a population of approximately 15,000 people living predominantly from agriculture and some ranching. The project is located in an area of conserved natural forests and foresees, along with forest conservation, the recovery of deforested areas, measures to control forest fires and the implementation of other sources of sustainable income-generation.

The project is developed in partnership with the National Council of Protected Areas (PA), manager of PAs and authorizing entity for resident communities to retain residency permissions in these areas; Defenders of Nature (*Defensores de la Naturaleza*, in Spanish), a national NGO that co-directs the area and will implement the project; Rainforest Alliance, which supports the projects design and searches for buyers; TNC, which advises on the development of the financial mechanism; the NGO Oro Verde, provides technical and financial support and assists in the search for buyers; Conservation International (CI), who supports the project's political articulation; and the Government of Guatemala, which contributes funding to perform carbon inventories.

STRATEGIES ADOPTED BY THE PROJECT



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BASELINE

The project uses a projected baseline, built through a deforestation projection LCM model which is currently under development. Data on forest carbon stocks and their respective emissions will be obtained from local forest inventories.

ADDITIONALITY

The government of Guatemala is unable to provide the necessary influx of resources to guarantee enforcement of the park, which is threatened by land grabs and illegal deforestation. In addition, the communities within the park area and its surroundings do not receive technical assistance from the government to guarantee their livelihoods. As such, the carbon resources are the only guarantee that the area will be controlled and enforced, and the communities will receive not only technical assistance but also access to other, sustainable income-generating sources.

LEAKAGE

The risk of leakage consists in the activity shifting from communities that would deforest the park in the baseline, and that, being prohibited from cutting the forests in the project scenario, could migrate to deforest in outside other areas. The project intends to implement measures to stabilize the communities already living in the area, improving their quality of life and generating other income sources. A leakage monitoring plan will be implemented in the project area and in the Park's boundaries. A credit buffer will also be created, with a percentage yet to be defined.

PERMANENCE

The creation of a permanent fund has been proposed with the end of guaranteeing the necessary flow of resources for initial activities over the life of the project and possibly after its conclusion. In addition, enforcement agreements will be made with the government and the implementation of sustainable development activities together with surrounding communities.

MONITORING

The monitoring of carbon stocks and dynamics will be done through forest inventories, based on a methodology proposed and under development by Rainforest Alliance.

COSTS AND FINANCING

Design Stage: (PIN/inventory): US\$100,000

Funding Sources: Support from institutions involved in the project

Financial Return: Currently being calculated. Once the definitive baseline scenario and carbon stocks are established, data will be generated to allow the verification and economic feasibility of the project as well as the price of carbon sales necessary for the project's viability.

DESTINATION OF CARBON CREDITS

The project has not yet arrived at this stage, but has the intention to sell its REDD credits in the voluntary carbon markets with certification under CCB and VCS.

INTEGRATION TO NATIONAL REDD POLICIES

The project was discussed and articulated with National System of Protected Areas (Government agency), and seeks to contribute to the development of political and regulatory benchmarks for REDD, still nonexistent in Guatemala.

PRIMARY CHALLENGES

Dealing with the lack of legal definition in the country and guaranteeing the necessary resources for its complete design.

**PARRAGUAY**

National deforestation rate: 1% - MFMD

Estimate of deforestation rate does not apply.



The project consists of the creation and protection of a private protected area in the eastern region of Paraguay, a highly contentious area under great land use pressure. The project is located in the MBaracayú Forest Nature Reserve in Yagatimí, Canindeyú State, Paraguay, with an area of 64,400 ha.

It was one of the pioneers in terms of compensation for forest conservation, and as there were no clearly defined themes such as REDD in its starting date (in the 1990's), proponents had to create some concepts and establish their own structural arrangements to develop the project strategy.

The project is administered and implemented by the Moises Bertoni Foundation, which serves to carry out the envisioned activities; and The Nature Conservancy as the partner responsible for administering the resources generated from the sale of sequestered carbon.

STRATEGIES ADOPTED BY THE PROJECT**BASELINE**

In 1990, existing methodologies were based on the measurement of sequestered forest carbon, based on inventories of carbon measurements in the soil, roots and above ground biomass. In this sense, at the moment that the conservation of the property and its forests was confirmed between the Moises Bertoni Foundation and the company AES, the forest carbon sequestration over 35 years was estimated at 27 million tCO₂e, of which 13 would be used by the company for its compensation. The methodology utilized was then validated by international experts in forest carbon measurement.

ADDITIONALITY

Based on statistics and satellite images of deforestation in neighboring areas, it was confirmed that a business-as-usual scenario without the creation of the reserve would lead to the disappearance of the forest. This is also confirmed by the fact that, at the moment of the project's creation, an offer for the sale of the property was on the table by a Brazilian group interested in an agricultural project in the region.



Sequestered carbon approach

LEAKAGE

The project has several socio-economic and environmental initiatives underway in the surrounding areas, which are inhabited by traditional and indigenous communities. The project's strategy is to create alternative sources of income and rural development, as well as education and technical capacity-building, in order to maintain these families in their areas and guarantee that there is no deforestation shifting due to the project implementation.

PERMANENCE

The permanence will be assured based on legal benchmarks for protection and cooperation with neighboring communities that favors conservation which incorporates environmental best practices in their production systems. A fiduciary fund was also created, fed by the sale of initial carbon credits, and which guarantees the sustainability of resources even after the end of the sales contract (35 years).

ADDITIONAL BENEFITS

Creation of a socio-environmental label for products from neighboring communities, creation of an educational center for rural and indigenous communities and the creation of an ecology technical course.

In 2000, UNESCO created the first Biosphere Reserve in the country, with the Mbaracayú Reserve as the nucleus. As such, the projects work plan spans five areas: (i) Consolidated management of the reserve and development of a local Steering Committee, (ii) Scientific Research, (iii) Rural Development, (iv) Environmental Education, (v) Private Conservation Initiatives which create new private reserves.

MONITORING

Monitoring of deforestation and forest carbon stocks is accomplished to local satellite images and *in situ* data collection.

COSTS AND FINANCING

Implementation: US\$2,000,000 for the purchase of the property and conversion to a reserve and US\$150,000 annually for the establishment of a protection system and work plan

Maintenance: US\$500,000 annually

Funding Sources:

- Fiduciary fund: Created through the initial sale of carbon credits (representing nearly 50% of total costs)
- International Cooperation: To finance part of the total costs (ex: USAID, EU, World Bank, IDB, AECID, others)
- Financial Return: Through capitalization of the fiduciary fund, which began with US\$1,500,000 and currently holds nearly US\$5,200,000.

DESTINATION OF CARBON CREDITS

Were sold to AES Corp. as compensation for the CO₂ emissions by its subsidiary in Hawaii, Barbers Point. The price was US\$0.15 per tCO₂e.

INTEGRATION TO NATIONAL REDD POLICIES

The national system of Paraguay is still under development, and the project can be useful for the development of similar projects.

PRIMARY CHALLENGES

To maintain the conservation of the area in the face of external pressures, given that the area lies in one of the most contentious zones in the country. In addition, cover the significant annual costs which require other sources to complement the fiduciary fund.



National deforestation rate: 0,1% – HFLD

Project's deforestation rate: 0,24 %



STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The project used a future deforestation projection model (Idrisi), which incorporates historical data analysis of land use change, obtained from satellite images and which makes projections of future deforestation trends in the region.

ADDITIONALITY

The area is located in a region suffering heavy migration pressures, on account of the rural populations that come from the Andes to make a home in the region and drive deforestation processes with the establishment of agricultural operations. As the State is not capable of providing consistent or sufficient funds to guarantee the effective protection of this area, this is expected that the financial benefits generated by the REDD project will cover these expenses.

LEAKAGE

One of the project's risks is that the resident populations of the reserve move out to the margins of the area and cause an increase in emissions outside of the reserve. In this case, conservation agreements will be made with these populations, which could continue living in their established communities but who agree not to deforest new areas. In the buffer zone surrounding the area, technical assistance activities and improvements in agroforestry systems will be developed. Oversight



and enforcement activities will be carried out in coordination with local authorities.

PERMANENCE

Sustainable programs will be promoted to provide alternative sources of income for communities, such as agroforestry systems and ecotourism activities, particularly in the Park's surrounding buffer zone. A credit buffer is predicted, but has yet to be finalized.

MONITORING

The monitoring plan will be accomplished using methodologies proposed by the BioCarbon Fund (BioCF) and a validation by Voluntary Carbon Standards (VCS). In relation to co-benefits, the Conservation Agreements will be employed which consists of establishing agreements with local communities to generate conservation activities and avoid the advance of deforestation.

COSTS AND FINANCING

Design Stage: US\$2 million, over 3 years

Funding Sources: Walt Disney Company

Financial Return: Not yet calculated

DESTINATION OF CARBON CREDITS

These VERs will be used to offset the emissions of the Walt Disney company.

INTEGRATION TO NATIONAL REDD POLICIES

The national REDD system which Peru is supporting is coincidental with this project, as the national position supports a “nested approach³¹”. The Government is involved and is in agreement with its development and implementation.

PRIMARY CHALLENGES

The project's primary challenge is the search for funds to develop the project, particularly in light of global economic difficulties. Another issue is the need of building capacity and knowledge about the subject with involved parties (government as well as local populations).

³¹ For more details see Pedroni *et al.*, 2009.



National deforestation
rate: 0,1% – HFLD

Project's
deforestation rate: N/A



STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The baseline scenario is currently being elaborated from a Land Use Change Model – LCM, still in the process of being built. It will consider the entire life of the project, from 2007 to 2027.



ADDITIONALITY

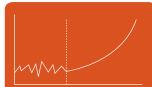
The fact that the area was declared a National Park in 2002 does not automatically guarantee its conservation. Numerous and intense efforts were required to secure the funds that guarantee its implementation and conservation, since that the Peruvian State has limited budgets for the implementation of Protected Areas. In this sense the carbon project would be one of the possibilities to support management actions in and around the park thereby guaranteeing its effective protection and consolidation.



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LEAKAGE

The primary risk of leakage is the dislocation of activities that previously occurred in the park and which, after the project's initiation, could be displaced to other areas, since that there is an active migration underway in the region. To control this problem, a buffer zone was created around the reserve of over 2.3 million hectares, defined by surrounding rivers, to monitor possible leakage activities. Besides this, the project foresees the creation of a credit buffer, where 15- 20% of the credits generated are set aside to deal with cases of leakage or non-permanence.



PERMANENCE

To date the actions taken place in the Park have depended entirely on resources donated from international sources. In securing the financial benefits of carbon, the economic sustainability of the project can be secured as well as the establishment of a fiduciary fund, which would permit the implementation of actions that would guarantee its conservation over the long term. There are minimal problems with forest fires in the area, but even so, a credit buffer of 15-20% (see above) will be established to deal with these and other risks.

MONITORING

Will be accomplished through analysis of satellite imagery and ground-truthing. To complement these efforts, a monitoring methodology for integral management will be enacted through the Conservation Compatibility Index (CCI), which has been active since 2004.

COSTS AND FINANCING

Pre-implementation/validation: Approximately US\$200,000 for the development of the deforestation model and the PDD (Project Design Document).

Implementation: Approximately US\$2 million annually, summing US\$40 million over the duration of the project

Funding Sources: Funds for Park maintenance and program development come from external funding sources (USAID, Moore Foundation, and Blue Moon, among others). The primary support for achieving concrete results from the design of REDD projects come from the company Exelon.

Financial Return: Not yet calculated

DESTINATION OF CARBON CREDITS

The idea is to access the voluntary carbon market for negotiating the project's VERs.

INTEGRATION TO NATIONAL REDD POLICIES

Peru is currently evaluating and designing its position for a national REDD system. In the case of State System for Natural Protected Areas (*Sistema de Areas Naturales Protegidas por el Estado*, in Spanish), led by the National Service for Natural Protected Areas (*Servicio Nacional de Areas Naturales*, in Spanish), analysis is underway as to the opportunities presented by the environmental services of the area, as well as efforts to catalyze the participation and support of civil society through administrative contracts, for example, as in the case of the Cordillera Azul National Park.

PRIMARY CHALLENGES

The application of a methodology that allows for realistic projections for deforestation is a great challenge considering the many variables which influence deforestation dynamics. The question of "legal holes" in the country's regulation of deforestation, which is in constant development, was another challenge encountered by the project.

MADRE DE DIOS AMAZON REDD PROJECT



PERU



National deforestation rate: 0,1% – HFLD

Project's deforestation rate: 0,88 %



The project consists of the conservation of an area of 100,000 ha under forest concessions, located in Iñapari, in Tahuamanu, Madre de Dios, amazonian region of Peru. The vegetation in the region belongs to the Vilcabamba-Amboró Conservation Corridor, one of the most important centers of biodiversity worldwide.

The project is implemented in forest concession belonging to two timber companies: Maderacre and Maderyja, which are subject to forest management certification (FSC) in these areas. The companies manage a small area per year facing the project area and thus have insufficient funds to cover the costs of enforcement and control over the total area, which now faces increasing land grab and deforestation pressures.

The project is made possible through a partnership between the timber company Maderacre SAC and Maderyja SAC as owners of the project; Greenoxx, an NGO that develops and finances the project, Association for Research and Integral Development – AIDER (*Asociación para la Investigación y Desarrollo Integral*, in Spanish), a local partner in project development and support from the World Wildlife Fund (WWF), CESVI and Pronaturaleza, which made possible the FSC certification for sustainable forest management operations. The project is under CCB validation.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE

The baseline was established gathering forest carbon inventory data and allometric equations, and deforestation projection generated from the DINAMICA model, which projects future deforestation tendencies for the area.

ADDITIONALITY

The analysis of additionality was based on the tool for demonstration and assessment of additionality in A/R project activities, comparing scenarios with and without the project. In the absence of the project, there would be significant pressures on the areas that are under forest management, increasing the chances of illegal logging. In addition, the paving of the interstate Interoceanica Sur Highway will also increase pressures on the forest and generate an increased need for oversight and vigilance.

LEAKAGE

The leakage analysis was based on two VCS-validated methodologies: "Estimation of emissions from activity shifting for avoided unplanned deforestation"³² to estimate leakage, and "Methodology for Estimating Reductions of Greenhouse Gases Emissions from Frontier Deforestation"³³ to determine the buffer zone. The proj-

ect plans to monitor leakage through a specifically designed series of indicators.

PERMANENCE

A non-permanence buffer is planned to retain 20% of the credits that could be sold by the project. Besides this, predicted monitoring activities and vigilance will help to guarantee the permanence of the VERs.

ADDITIONAL BENEFITS

Capacity building of participating communities and other stakeholders. Dissemination of best practices.

MONITORING

Baseline monitoring will be done to verify the precision of the deforestation projections. The monitoring plan will include satellite imagery; and *in situ* verifications to monitor land use and land cover changes, carbon stocks, non-CO₂ gas emissions and leakage. In addition, socio-environmental benefits will also be monitored by the project.

COSTS AND FINANCING

Pre-implementation/validation: US\$150,000

Implementation: 2009: US\$525,434

Maintenance: Total costs in 25 years: US\$47,392,771

Funding Sources: Greenoxx, Maderacre SAC and Maderyja SAC

Financial Return: An estimated US\$135,912,633 over 25 years, considering a price of US\$4/tCO₂e until 2009 and US\$5 after 2009.

DESTINATION OF CARBON CREDITS

Commercialization with the private sector – as yet no firm price established (in negotiation).

INTEGRATION TO NATIONAL REDD POLICIES

As established in concession systems, the companies have the right to manage the environmental services of these areas. Counsel has been sought several times from the Federal Government, which has given a green light for the project's design and implementation.

PRIMARY CHALLENGES

Coordinating the work with a team of specialists from diverse disciplines.

³² Available at www.netinform.net/KE/files/pdf/13_LK-ASP%20Leakage%20activity%20shifting%20planned%20deforestation%20v1.0.pdf | ³³ Available at www.v-c-s.org/docs/RED%20Frontier%20Methodology%2028nov08.pdf



National deforestation
rate: 0,1% – HFLD

Project's
deforestation rate: N/A



The project's objective is to protect the existing forests of the Tambopata National Reserve and the Bahuja Sonene National Park, through activities that promote the sustainable development of resident communities surrounding these areas as well as regulatory and enforcement actions. The project is located in the municipalities of Tambopata and Inambari, Madre de Dios region of southeastern Peru. The total area of the project is 550,000 ha, predominated by tropical rainforest.

The project is developed in partnership between AIDER, the project's technical and executive lead through an administrative contract with the Peruvian State; the company Amazon Forests – SFMBAM (*Bosques Amazonicos*, in Spanish), investor in the project and owner of its carbon credits; and the Peruvian State, owner of the country's heritage forest lands.

STRATEGIES ADOPTED BY THE PROJECT

BASELINE



The baseline scenario will be designed based on a Land use Change Model (LCM) using the DINAMICA³⁴ software. Deforestation in the area occurs basically in an un-planned manner, as much by expansion of the agricultural frontier as by the opening of new areas not directly related to previously human settlements. This pattern depends on various factors, such as distance from navigable rivers, population centers, highways and previously deforested areas, etc.

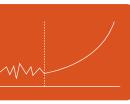
ADDITIONALITY



The construction of the Southern Interceanic Integration Interstate Highway, which will connect Brazil to the Pacific Ocean is the primary predicted driver of deforestation, as it will decrease the costs of access to forest lands and increase the profitability of agricultural activities. Without the resources derived from the REDD project, it would be impossible for SFMBAM to finance the conservation activities executed by AIDER, and neither the state would have the sufficient resources to accomplish it, particularly given the new scenario of the road's construction.



LEAKAGE



The project will determine a "leakage belt" based on an official buffer zone that was established for the Reserve as an area for research and analysis. The movements of agricultural and mining activities will be monitored on this area as they are the primary factors influencing leakage. All said, it is hoped that leakage is minimized through the implementation of a program to incubate alternative production systems, which are expected to change the patterns of economic development associated with deforestation in the region.

PERMANENCE

AIDER has an administrative contract in the area for the next 7 years, with the possibility of extension to 20. Independently, it was signed a contract between SFMBAM and the Peruvian State ensuring that the State is committed to implement the necessary actions, such as oversight and enforcement, to guarantee the permanence of VERs predicted by the project. Agreement is still being reached as to the financial mechanism that will guarantee annual pledges after the 8th year.

MONITORING

The project will use the Modular Methodology³⁵ that is currently in the process of validation by Voluntary Carbon Standards.

COSTS AND FINANCING

Design and pre-implementation: US\$5.2 million over the first 7 years (including carbon inventories, creation of a baseline and PDD, implementation of productive projects etc), and US\$500,000 per year for the following 13 years

Funding Sources: SFMBAM is funding all project costs.

Financial Return: Not yet estimated

DESTINATION OF CARBON CREDITS

The expected VERs will be sold to the private sector, although there are no negotiations currently underway.

INTEGRATION TO NATIONAL REDD POLICIES

The national REDD system that Peru is supporting is consistent with this project, as the national system supports both the focus on "nested approach" as well as a focus on REDD+, with sub-national projects that generate significant social and environmental co-benefits. This project in particular counts on the formal acceptance by the Peruvian State through an Administration Contract. Currently, Peru has been initiating a process to prepare a Readiness Proposal Plan to the World Bank (FCPF).

PRIMARY CHALLENGES

Establishing the baseline scenario for the project area, seeing that historical deforestation rates do not adequately represent current and future trends. This is due to the foreseen construction of various infrastructure projects. Also, determination of leakage associated with the project represents another important challenge, as does demonstrating additionality in a legally protected area.



PROJECTS IN INITIAL PHASE

Apart from the projects presented before, there are other projects still in preliminary design phase that do not have all their technical and methodological questions defined. Many of these projects already use concepts and lessons learned from existing projects. This is a clear indication of the important role that sub-national initiatives have in the process of readiness and replication of successful cases. Among them, we can cite:

PILOT REDD PROJECT IN NORTHWESTERN MATO GROSSO, BRAZIL.

Located in several municipalities in Northwestern Mato Grosso State of Brazil, it comprises a total area of 10.5 million hectares, of which 8.6 million are areas of remnant forest. The project is being developed in partnership with the State Government, The Nature Conservancy (TNC-Brazil), and the Institute Center of Life (ICV). The project has three main strategies: (i) improving forest governance; (ii) promoting forest conservation on private lands and protected areas and (iii) compensa-

ting indigenous peoples and traditional communities for their efforts towards forest conservation in their territories. Estimates of emissions reductions for the whole region are around 500 million tCO₂ between 2009 and 2018.



REDD PROJECT CALHA NORTE IN PARÁ STATE, BRAZIL.

The project is located in the Northern margin of the Amazon River Basin in Pará State, Brazil, in the State Forests of Paru, Faro and Trombetas, totaling an area of 7.4 million hectares. It is developed in partnership with the State Environmental Agency of Pará State (SEMA-PA), Conservation International- Brazil and the Instituto do Homem e Meio Ambiente da Amazônia (IMAZON) (Institute of Man and Environment of the Amazon). The project aims to stop the advance of deforestation and promote the conservation of forest carbon stocks in State Protected Areas. The main

threats are logging pressures, mining activity (including panning for gold) and the opening of new roads. At the same time the project aims to involve local residents in the planned activities, guaranteeing that communities directly receive the resources from the carbon credits generated.

APUÍ GREENER, APUÍ, AMAZONAS, BRAZIL.

Apuí is a municipality occupying an area of approximately 5 million hectares in the southeastern of Amazonas State, Brazil. The project involves a total area of roughly 12,000 ha of farmers and ranchers from Apuí for the recovery of water and soil quality and the reduction of carbon emissions from deforestation and forest degradation (REDD). The project aims to encourage the restoration of 1,500 ha of waterside areas (Areas of Permanent Protection) that are degraded or unproductive as pasture. Idesam developed the project, supported by the Apuí Environment Secretariat in the implementation and management. Producers are invited to participate voluntarily in the project, choosing an area of at least 5 ha of his property to be restored. The project provides technical assistance and seedlings, and at the same time requires that producers do not cut down more forests from their properties. In addition, the project will establish a central nursery and support the development of small nurseries for seedling production in Apuí. The project aims to provide an annual payment to producers replanting their forests. Currently, there are about 1,000 hectares of land planned for reforestation, representing 150 producers who voluntarily have enrolled on this project. The next step is to georeference the properties and the areas to be restored and look for investors in the voluntary carbon market

XINGU (CCSH) PROJECT TO REGISTER SOCIO-ENVIRONMENTAL COMMITMENTS, MATO GROSSO, BRAZIL.

The project is located in the headwaters region of the Xingu River, Mato Grosso State in Brazil, encompassing several private rural properties. It is developed in partnership with the NGOs Aliança da Terra (Land Alliance) and the Institute of Environmental Research of the Amazon (IPAM). The goal is to stimulate agricultural production based on social and environmental standards that include the identification and prioritizing of best management practices while helping landowners to solve conflicts between production and environmental protection. The benefits generated by CCSX are: (i) transparency as to the socio-environmental performance of producers; (ii) foster the promotion of best management practices; (iii) recognize the efforts of registered producers towards conservation and management of natural resources within their properties; and (iv) increase and improve market access for registered products. Apart from these, other benefits are worth mentioning, such as the encouragement for the legal recognition of land tenure through certification (titling) and the promotion of economic, financial and political incentives to benefit responsi-

ble producers. More information can be found at: <http://www.ipam.org.br/biblioteca/livro/id/110>



SÃO FÉLIX DO XINGU PILOT PROJECT IN PARÁ, BRAZIL

Located in the southeast of Pará State, the municipality of São Félix do Xingu has 8.6 million ha, of which 50% are indigenous lands and 6% are protected areas. The project is being developed in partnership with the State Government, the Municipal Government and The Nature Conservancy (TNC Brazil). The main deforestation driver in the region is unsustainable cattle ranching. Project strategies are: providing tools for ranch owners and the beef industry to comply with forest legislation; improving large and small scale ranching practices; improving forest governance at state and municipal levels; support sustainable activities such as cocoa and milk production; development of PES for private owners and strengthening the management and protection of indigenous lands and protected areas.



SAN NICOLÁS FORESTS PROJECT, COLOMBIA

Located in the eastern portion of Antioquia State in Colombia, the Project encompasses the San Nicolas valleys. Its objective is reducing deforestation in an area of 10,700 hectares in a 20 year time span. The main deforestation drivers are the expansion of agricultural and cattle ranching, degradation from gathering of fire wood and demographic growth. To diminish deforestation rates, the project aims to work with communities and landowners through active protection measures, biological and economical enhancement as well as education, capacity building and strengthening of environmental agencies.



COMMUNITY CERTIFIED FOREST MANAGEMENT PROJECT AS AN ALTERNATIVE TO DEFORESTATION IN THREE NATIVE COMMUNITIES IN THE UCAYALI REGION, PERU.

The total area encompasses 35,000 hectares in the Ucayali region, east-central Peru. A project in partnership with communities and the NGO AIDER, the primary technical and social adviser for local communities through the management process as well as the REDD project. The project aims to create a cash flow to pay communities for forest conservation, as the income from forest management is not enough to guarantee the control and surveillance of the areas and adequate resource flows. Furthermore, it intends to increase the environmental awareness of communities and promote sustainable agroforestry and agricultural practices. Each community will be responsible for implementing the REDD project within their territory.



OTHER RELEVANT INITIATIVES

Besides the REDD projects already presented in this casebook, there are other initiatives that do not fit the character of a specific project but as a program, and which play an important role in not only reducing emissions but also in structuring developing countries readiness processes.

In this section three international programs are presented: the Forest Carbon Partnership Facility (FCPF), the UN-REDD Program and Norway's International Climate and Forest Initiative. These programs have as their primary objective the building of country capacity to implement national REDD systems that can generate robust and credible reductions plus include important instruments for mitigating climate change, combined with economic and social development.

Another relevant national initiative currently under development that is worth highlighting is the Amazon Fund (*Fundo Amazônia*, in Portuguese), an initiative of the Brazilian Government created to harness voluntary donations by countries/individuals/companies wishing to contribute financially towards the reduction of deforestation in Brazil.

Two other initiatives worth mentioning, although not detailed in this section, are political processes involving subnational governments. In Brazil an Amazon Governors Task Force was created and presented recommendations on REDD to the Federal Government. The other process is a Memorandum of Understanding by the Governments of Aceh and East Kalimantan (Indonesia), Acre, Amapá, Amazonas, Mato Grosso and Pará (Brazil) and California, Illinois and Wisconsin (US) to cooperate on REDD and other forest carbon strategies to mitigate climate change.

The “Forest Carbon Partnership Facility (FCPF)”^a is a World Bank initiative launched in 2007 which seeks to advise developing countries in their efforts to reduce emissions from deforestation and forest degradation (REDD). The FCPF is composed of two mechanisms:



Readiness Mechanism. Currently support the preparation of nearly 37 countries to participate in an international REDD mechanism. The readiness mechanism offers technical and financial assistance to these countries to design a REDD strategy, in other words a wide-reaching national plan for the reduction of emissions from deforestation and forest degradation, the establishment of a national reference scenario and the design and implementation of a national monitoring, reporting and emissions verification system connected to deforestation and degradation (DD). Participating countries elaborate a “REDD Readiness Preparation Proposal (R-PP) which, once endorsed by the FCPF’s Participants Committee, is financed by the readiness mechanism.

Carbon Fund. This fund aims to support “Emissions Reductions Programs” by means of results-based compensation (emissions reductions tied to DD). Countries will receive payments for reducing their emissions below the reference scenario if: (a) they demonstrate the ownership of the EDD credits and adequate monitoring capacity, and; (b) they establish a realistic baseline scenario and options for emissions reduction.

Together these approaches, by developing an innovative and practical mechanism, seek to generate knowledge and lessons that are realistic in terms of costs and that can reduce emissions from deforestation, mitigate climate change and generate additional benefits.

There are currently 37 countries selected to participate in the FCPF’s Readiness Mechanism. Of these, three have their Readiness Preparation Proposal completed (Guyana, Panama and Indonesia) and Ghana and Surinam have presented their preliminary versions. It is hoped that a variety of other countries present their proposals by the first semester of 2010.

The minimum volume of the Readiness Fund is US\$ 185 million, with expected contributions of at least US\$5 million per funder, from governments and other public and private entities. The minimal operational volume for the carbon fund is US\$ 200 million.

In order to deal with the risk of leakage within a country, the program will be coordinated at the national level. Working at this scale does not prevent subnational programs and projects from being implemented, however, they should be tied to national accounting systems and reference scenarios.

^a For more information at www.forestcarbonpartnership.org

The United Nations Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, or “UN-REDD Program”, is a partnership between the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP), which support countries’ to develop their capacities to reduce emissions from deforestation and forest degradation and implement a future REDD mechanism for the post-2012 climate regime. The partnership works both at the global and national levels through

- Mechanisms to support the creation of national REDD strategies;
- Support towards an international consensus on REDD, to develop normative solutions and standardized approaches based on concrete science, as part of the advance of REDD instruments within the UNFCCC.

The objectives of the UN-REDD program are to empower countries to manage their national REDD processes, advise them on identifying strategies that determine causes of deforestation, develop methods and tools to measure, relate and verify (MRV) GG emissions, facilitate the participation of national actors and provide technical and financial assistance.

The method behind a REDD mechanism is to generate the necessary flow of resources to give incentive to significantly reduce emissions from deforestation and forest degradation in developing countries with tropical forests. In order to prepare this mechanism it is first necessary to evaluate which payment structures and REDD support project could generate incentives for real, realistic, measurable and credible emissions reductions, which also maintain and improve ecosystem services and the livelihoods of forest-dwelling populations.

In order to reach this objective, partner institutions of the UN-REDD program contribute their specific and complimentary areas of expertise. FAO supports technical questions related to forests and the development of robust MRV processes to reduce emissions. The UNDP addresses questions of governance and the socio-economic implications of REDD, including the participation of civil society and indigenous and local communities. UNEP convenes and engages decision-makers involved in the REDD agenda and promotes an understanding of the additional environmental benefits promoted by REDD.

There are currently fourteen countries at different levels of participation in the UN-REDD Program. While all countries participate in knowledge dissemination and contact networks, nine of them currently qualify for financing under the UN-REDD Program, as indicated in the map below. This selection was based on a dialogue among the three UN agencies and participating countries – based on a series of criteria including the expressed willingness of the country to participate, relevance to the global REDD agenda (including potential emissions reductions) and desire to reach regional climatic equilibrium.

* For more information at www.un-redd.org

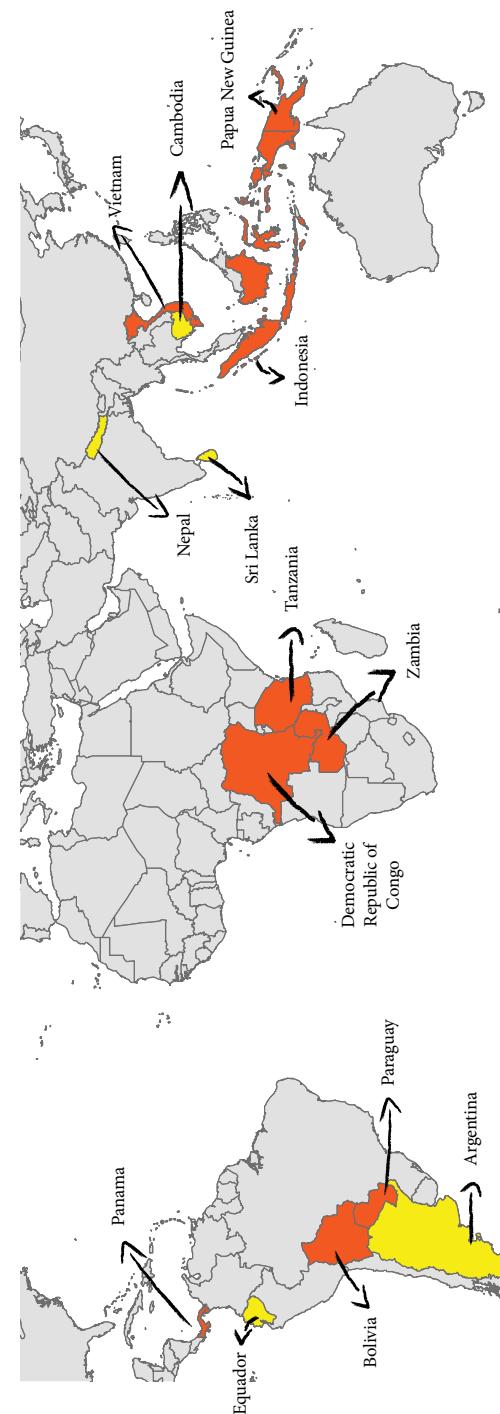


Figure 03 The fourteen countries included in the Program

UN-REDD Program pilot countries

Observer countries (recently joined the Program)

In 2007, during the international climate negotiations on Bali, the Norwegian Government pledged substantial funding towards efforts to reduce emissions from deforestation and forest degradation. Norway's International Climate and Forest Initiative has been established to support developing forest countries that are trying to control deforestation implement this initiative. The long-term goal is to play a part establishing a global, binding, long-term post 2012 regime that will ensure deep enough cuts in global GHG emissions. The inclusion of emissions from deforestation and forest degradation in a new international climate regime, to take early action to achieve cost-effective and verifiable reductions in greenhouse gas and to promote the conservation of natural forests to maintain their carbon storage capacity. Funding will have an upper limit of around US\$ 600 million annually.

The Norway's International Climate and Forest Initiative cooperate with the following partners and respective contributions during 2009:

The United Nations: has established the UN-REDD Programme, to coordinate UN activities in this field, and received **US\$ 50 million**.

The World Bank: has established two programmes to assist developing countries in their efforts to reduce emissions from deforestation and forest degradation. They are the Forest Carbon Partnership Facility, which received **US\$ 40 million**, and the Forest Investment Program, which received **US\$ 50 million**.

The Congo Basin Forest Fund: this fund, which is hosted by the African Development Bank, supports conservation and sustainable use of the forests of the Congo basin. Will receive **US\$ 100 million** from 2008 and until the end of 2010.

Brazil's Amazon Fund: the fund will distribute grants for projects that support the Brazilian authorities' efforts to reduce deforestation. All payments to the fund will be linked to performance, in other words, to the extent that Brazil has managed to reduce emissions from deforestation and forest degradation. Will receive up to **US\$ 1 billion** in 7 years.

Tanzania: Norway is providing bilateral support for Tanzania's efforts to reduce emissions from deforestation and forest degradation, and Tanzania is also included in the UN and World Bank programmes. Will receive **US\$ 100 million** over 5 years.

Norad: Two support researches, NGO advocacy and implementation and private sector initiatives. The purpose of this funding scheme is to support REDD pilot activities and development of methodologies by civil society organizations, in order to generate input to the climate change negotiations and experiences from REDD activities in the field. The available funding in 2008 was around US\$ 2 million, in 2009 was **US\$ 35 million**. Funding in 2010 is expected to be around the same given in 2009.

The International Tropical Timber Organization (ITTO): has established a new programme for reducing deforestation and forest degradation and enhancing environmental services in tropical forests (REDDES). The amount of funding is not available.

* More information at www.regjeringen.no/climate-and-forest-initiative



The Amazon Fund was recently created by the Brazilian Government based on demands and suggestions made by civil society with the contribution of the Norwegian Government. The fund is directed by the National Bank for Economic and Social Development (BNDES, in Portuguese), following guidelines and criteria established by a Steering Committee composed of representatives from federal and state governments, NGOs, social movements, indigenous peoples, scientists and businesses. It is also supported by a Technical Committee, appointed by the Secretary of the Environment and whose role is to verify emissions and emissions reductions from deforestation in the Amazon.

The fund's objective is to capture donations in the form of "non-refundable investments" to be applied to preservation and monitoring activities and the fight against deforestation, as well as the promotion of conservation and the sustainable use of Amazon forests. In addition, 20% of its resources can support the development of regulatory and monitoring systems in other Brazilian biomes and other tropical countries.

Based on donations received, certificates will be issued equivalent to the tons of "reduced carbon" and corresponding to the value of the contribution, pre-determined at US\$5/tCO₂. Each donor will earn a certificate attesting to the contribution made for the reduction of emissions in a given period, expressed in tons of CO₂. These certificates are numbered and non-transferable and cannot generate carbon credits to offset emissions from just any source.

The annual emission reductions calculations will be based on a comparison between historical emissions of the last 10 years (reviewed every five years) and emissions over the year in question. When a reduction in deforestation effectively happens, the Fund can capture resources for investment corresponding to the tonnage of reduction; in case emissions increase, the difference will be discounted from expected resources during the next period. These emissions reductions should be validated by the Technical-Scientific Committee.

The vision of the Amazon Fund is to raise nearly US\$ 20 billion until the year 2020. The first donor to the Amazon Fund was the Government of Norway, which committed to US\$1 billion, to be transferred to Brazil over 7 years. The first transaction of US\$ 140 million has already been made.

The transfer of resources from the Fund to projects is accomplished through a process of analysis and internal review by the BNDES (maximum transaction period of 7 months), which is not necessarily tied to a real demonstration of results in terms of emissions reductions (quantified in tCO₂). Projects by governmental and non-governmental institutions can be funded in the following areas:

- Management of Public Forests and Protected Areas;
- Regulation, monitoring and environmental enforcement;
- Sustainable forest management;
- Economic activities developed from the sustainable use of the forest;
- Ecological and economic zoning, land use regulation and land titling;
- Conservation and sustainable use of biodiversity; and
- Recovery of deforested areas.

As of November 2009, 38 project proposals were submitted to the Amazon Fund. The proposals are divided into 3 categories: Submitted (received by BNDES); Framed (first phase of the analysis, considering the administrative and economic viability of the proposal); and Under review (technical, legal and environmental adjustments for the proposals to be funded). There are currently 33 projects submitted, 2 framed and 3 under review. The first round of approved projects is expected to be announced in the first half of December, 2009.

* More information at www.fundoamazonia.gov.br



PART 3

CONSOLIDATION,

ANALYSIS AND

FINAL

CONSIDERATIONS

OVERALL ANALYSIS OF THE PROJECTS

As the main objective of this casebook is to take a closer look at the profile and importance of subnational projects and initiatives and their potential role in the full implementation of national and international REDD mechanisms, the research focused on analyzing only the most advanced projects that already had information available. Apart from these projects, other initiatives and projects in an initial phasis were also identified and are described in the previous section.

In total, this Casebook mapped and described 17 REDD projects, considered to be in “advanced implementation stage”³⁶. These projects are distributed in 06 Latin America countries: Bolivia (01), Brazil (07), Ecuador (01), Guatemala (03), Paraguay (01) and Peru (04). See table 03.

Together, these initiatives aim to protect around 14.8 million hectares of tropical forests – an area equivalent of 3.5 times the territory of Denmark (figure 04), avoiding the emissions of about 522.7 million tons of CO₂e – the equivalent of more than half of the total annual emissions from transport sector in the European Union, figure 05.

Figure 04 Total area under REDD projects in Latin America (ha)

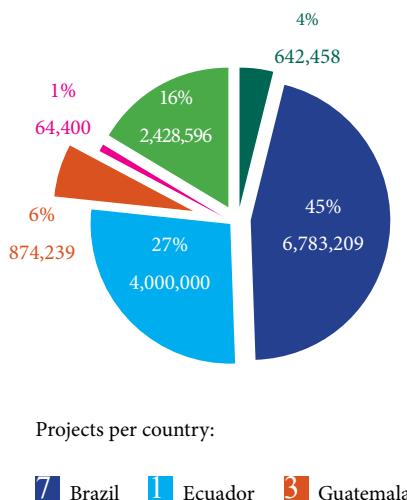


Figure 05 Volume of Reduced Emissions from Deforestation and Forest Degradation expected by country in the 17 projects mapped in Latin America (tCO₂e)

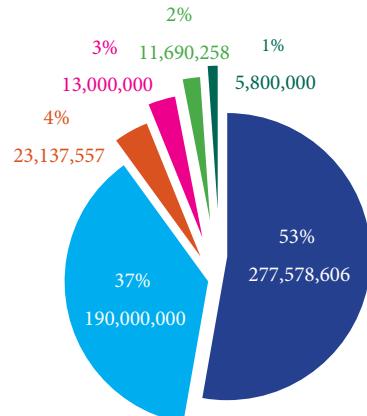


Table 03 Total REDD Projects in “advance implementation stage in Latin America

Project		Area (ha)	Lifetime (yr)	REDD (tCO ₂ e)
Bolivia	Noel Kempff	642,458	30	5,800,000
	Acre	5,800,000	15	62,500,000
	Ecomapuá	94,171	20	6,000,000
	Transamazon Highway	31,750	10	3,136,953
	Juma	589,612	44	189,000,000
	Antonina	18,600	40	384,264
	Suruí	248,000	44	16,500,000
	Genesis	1,076	20	57,389
Ecuador	SocioBosque	4,000,000	7	190,000,000
Guatemala	Maya Biosphere	600,000	20	20,000,000
	Sierra de las Minas	102,939	20	1,900,000
	Sierra del Lacandon	171,300	20	1,237,557
Paraguay	Mbaracayu	64,400	35	13,000,000
Peru	Alto Mayo	425,405	30	4,243,582
	Cordillera Azul	1,353,191	20	-
	Madre de Dios/Greenoxx	100,000	20	7,446,676
	Tambopata	550,000	20	-
Total		14,792,902		521,206,421

REDD GENERATION AND IMPLEMENTATION COSTS

Among the 17 projects analyzed, only 08 presented estimates for their total implementation costs over the project lifetime, as shown in table 04. The average project lifetime is around 21 years, ranging from 7 years for the governmental SocioBosque Program, to 44 years for the Juma Reserve REDD Project.

The total investment needed to implement these 8 REDD projects is US\$1,022,775,467. This investment will result in reducing 491 million tons of CO₂ that would be emitted to the atmosphere in a business as usual scenario without the projects implementation. The average “REDD generation costs per tCO₂e”³⁷ is \$3.49/tCO₂e (± 2.21).

³⁶ For the purposes of this Casebook, projects classified as in “advanced implementation stage” were those which presented at least (i) defined baseline scenario and quantification of emission reductions (even if at preliminary stage) and/or; (ii) activities under implementation and/or (iii) contacts or advanced stage of agreement with investors to sell the project’s VERs.

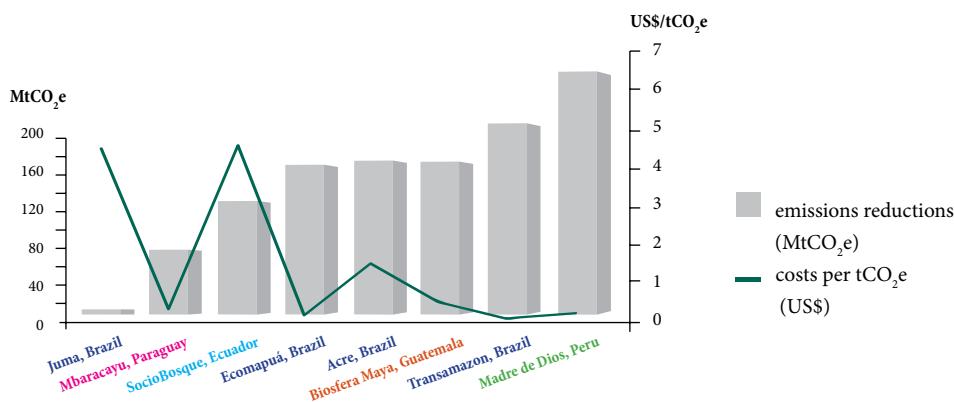
³⁷ The REDD generation costs per tCO₂e is calculated through the relation between the total implementation costs and the expected REDD volume: REDD Costs = Implementation costs (US\$) / Volume of REDD (tCO₂e).

There was a huge variation in REDD generation costs, not only among countries but also between projects in the same country. These costs presented a minimum value of \$0.13/tCO₂ and a maximum value of \$ 6.27/tCO₂, as presented in figure 06.

Table 04 Projects' implementation costs and REDD generation costs per tCO₂e

Project	Lifetime (yr)	Implementation cost (US\$)	REDD generation cost (US\$/tCO ₂ e)
Brasil	Juma	44	24,000,000
	Ecomapuá	20	23,597,968
	Acre	15	250,000,000
	Transamazon	10	15,427,499
Ecuador	SocioBosque	7	560,000,000
Guatemala	Biosfera Maya	20	80,000,000
Paraguay	Mbaracayu	35	22,750,000
Peru	Madre de Dios/Greenoxx	20	47,000,000
Total		1,022,775,467	

Figure 06 REDD generation costs per tCO₂e



One interesting aspect highlighted is that the relation among the REDD generation costs per tCO₂ and the overall project emissions reductions was not always positive (economy of scale) figure 06. For example, this becomes evident when comparing the Mbaracayu project in Paraguay, which has the 2nd lowest cost per tCO₂ with a relatively small generation of VERs, versus the Acre project in Brazil, which generates five times more REDD, but at a price 130% more expensive.

However, it is worth highlighting that these costs were calculated on a preliminary basis and cover a range of scopes and strategies adopted by each project to generate their emissions reductions. The variation of this costs can be attributed to a wide range of factors, among the following:

- 1) **Context of Deforestation Pressures:** the main causes and intensity of deforestation pressures have direct implications on the design and, mainly, in the amount of activities that will be carried out by the project
- 2) **Land Tenure:** the cost of opportunity for the forest protection can vary significantly depending on project's land tenure (private, public, community, indigenous territory, protected area, etc.); e.g: public lands tend to cost less than private ones to be protected
- 3) **Scope of activities:** can represent a huge variation in the implementation costs, depending mainly on the social and environmental benefits that the project expects to generate (e.g. support to communities, improvements to biodiversity, hydrological systems, etc.)
- 4) **Location and access to the project site:** the logistical and administrative costs for implementing proposed activities can vary in function of the site location and its access
- 5) **Involved and partner institutions:** projects that have governmental partnerships may have a cost reduction due to the financial counterpart and existing infrastructure not considered in the project's costs.

Thus, the combination of this factors will be determinant for defining the implementation costs of each REDD project. For example, one can expect that in regions with difficult access, low governmental presence, high deforestation pressure and existing communities, the implementation costs will be quite high, as the project will have (i) high logistical costs, (ii) large investments to structure activities, monitor and control illegal activities, (iii) long term activities related to social and economic development of the existing communities, among others.

PROPOSER INSTITUTIONS AND IMPLEMENTATION STATUS

Half of the REDD projects analyzed are still in the design phase. This phase is characterized mainly by the planning and preparation of activities and the elaboration of the Project Design Document (PDD) – that will quantify the project's expected emissions reductions. The PDD is also the document needed to conduct the validation and certification processes. This phase is usually started after the preliminary assessment of feasibility, when the proponents are sure about the project's implementation.

Concerning the profile of the proponent institutions of REDD projects, it is worth highlighting the significant participation of governments – present in 61% of the analyzed projects. This is due to the fact that a big portion of the projects (figure 07) are carried out on public lands or protected areas that by law are managed by governments. These governments are mostly local (departments, municipalities, districts, etc.) – with the exception of the Amazon Fund and the SocioBosque Program – which reflects the importance and innovation of local governments in the management of forests.

Figure 07 Proponent institutions of the 17 REDD projects mapped in Latin America

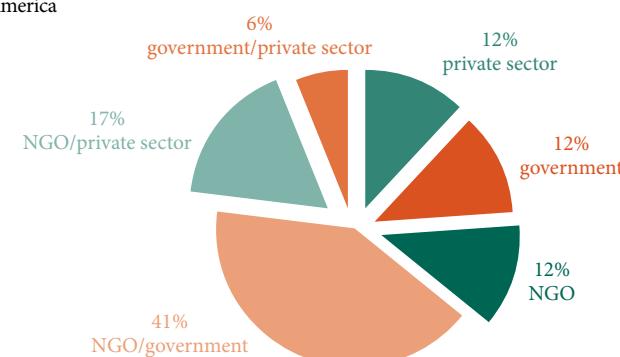
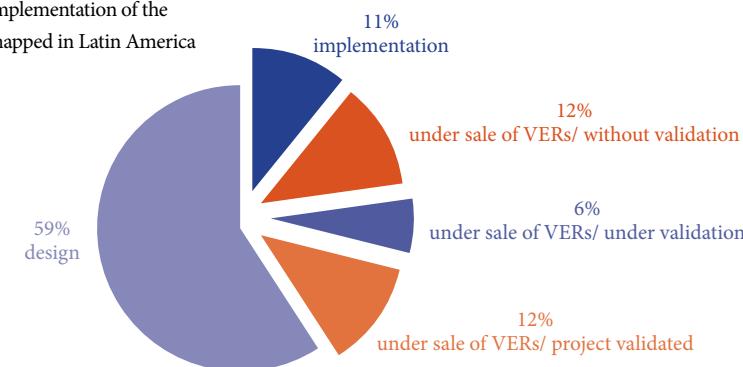


Figure 08 Status of implementation of the 17 REDD projects mapped in Latin America



FINAL CONSIDERATIONS

Although the scope of analysis of this study was limited to Latin America, and the creation and implementation of REDD projects and initiatives is quite recent, it was possible to reach interesting conclusions, that are listed below.

1 Scale of implementation: There is a significant amount of sub-national projects and initiatives for REDD implementation in Latin America. These projects are playing an important role both for effectively reducing GHG emissions from the forest sector while promoting sustainable development, as for generating readiness experiences towards the structuring and implementation of an international REDD regime under the UNFCCC.

2 Emission reductions and methodologies: The 17 projects analyzed in the study are expect to generate around 521,2 million tCO₂e of REDD VERs within the next 7 to 44 years. The design and implementation of these projects will also build strong methodological capacity in terms of Measuring, Report and Verification (MRV) for REDD, as well as for creating forest governance, mechanisms of benefits sharing and engagement of traditional and indigenous populations.

3 REDD generation costs: It is possible to that the amount of financial resources needed for REDD in all countries with tropical forests, are higher than those available in current funding sources. The investment needed for 08 (out of 17) projects analyzed is around US\$ 1,02 billion. This amount is almost the double of the total resources available annually in the Norway's International Climate and Forest Initiative - largest existent initiative for financing REDD nowadays. The average "REDD generation costs per tCO₂e" was estimated in US\$3.49 per tCO₂e (\pm US\$ 2.21).

ANNEXES

4 Institutional framework: Implementation of sub-national REDD projects requires institutional improvements of local, regional and national governments. Environmental management as a whole can benefit once this institutional framework will also be useful for other strategies such as sustainable exploitation of wood and non-wood products and other environmental services, and the consolidation of protected areas.

5 Baselines: The great majority (82%) of the projects opted to use a modeled baseline, instead of historical averages - although both approaches in all the projects scenarios represented deforestation rates higher than the national baselines. This situation is probably attributable to the fact that most of the projects are likely located in regions with deforestation rates higher than the national average - and thus get their baseline "adjusted" by the local conditions. This reflects the importance to consider and assess on-site conditions (agents and drivers of deforestation) for the specific reference regions of each project - since it may probably differ to a "national average".

6 Leakage: REDD implementation under sub-national scale has always been questioned as risky to generate leakage. All the projects assessed are focusing strong attention and developing serious approaches for dealing with leakage. The argument that REDD should focus only in national implementation, because of leakage risks, should not be considered. It seems that governance issues related to national implementation, present in most developing countries, are harder to deal than leakage related to projects. Governance improvement requires longer term investments, that could be reached including the implementation of sub-national REDD projects.

7 National Registry and double-counting: In order to foster the efficiency of REDD implementation both in national and sub-national scales, it is necessary that sub-national projects are encompassed in a national accounting framework to guarantee their consistency and avoid double accounting. One way to manage that is a national registry of emissions reductions, which is currently under preliminary discussions in some countries as Brazil and Peru.

8 Co-benefits and additional funding: Although REDD can generate institutional improvements, it cannot be seen as the only funding source for environmental management. Public investments by national governments, as well as traditional Overseas Development Assistance (ODA), are still necessary for protected areas and other environmental issues such as biodiversity and freshwater conservation.

9) Communities and local stakeholders: It is essential for all REDD projects to consider the consultation and engagement of local and indigenous populations in all project stages, such as design, planning and implementation. This study concludes that if good REDD projects are put in place, they can become strong instruments, not only for reducing GHG emissions and climate change mitigation, but also for protecting tropical forests and promoting sustainable development to its traditional populations.

ACRONYMS

AFOLU	Agriculture, Forestry and Other Land Use Projects
A/R CDM	Afforestation and Reforestation Clean Development Mechanism
BAU	Business As Usual
CBD	Convention on Biological Diversity
CCBS	Community, Climate and Biodiversity Standard
CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO ₂	Carbon dioxide
COP	Conference of the Parties to the UNFCCC
°C	Degree Celsius
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility of the World Bank
FSC	Forest Stewardship Council
GHG	Greenhouse Gas
GIS	Geographic Information System
GOCFC-GOLD	Global Observation of Forest and Land Cover Dynamics
HFHD	High Forest Cover with High Rates of Deforestation
HFLD	High Forest Cover with Low Rates of Deforestation
INPE	National Institute of Spatial Research
IPs	Indigenous Peoples
IPCC	Intergovernmental Panel on Climate Change
LCs	Local Communities
LFHD	Low Forest Cover with High Rates of Deforestation
LFLD	Low Forest Cover with Low Rates of Deforestation
LULUCF	Land Use, Land Use Change and Forestry
MRV	Measuring, Reporting and Verifying
NGO	Nongovernmental Organization
ODA	Official Development Assistance
OSIRIS	Open Source Impacts of REDD Incentives Spreadsheet
PDD	Project Design Document
PES	Payments for Environmental Services
REDD	Reduced Emissions from Deforestation and Forest Degradation
RLs	Reference Line/Levels
R-PIN	Readiness Plan Idea Note
SBSTA	Subsidiary Body for Scientific and Technological Advice
SFM	Sustainable Forest Management
tCO ₂ e	Ton(s) of carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
VCS	Voluntary Carbon Standard

GLOSSARY

ADDITIONALITY Measurable, long-term greenhouse gas (GHG) emission reductions and/or removal enhancements that would not have occurred in the absence of a particular project, policy, or activity.

AFFORESTATION As defined in the Marrakech Accords, direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding, and/or the human induced promotion of natural seed sources.

ANNEX I PARTIES The industrialized countries listed in Annex I to the UNFCCC that were committed to return their greenhouse-gas emissions to 1990 levels by the year 2000 as per Article 4.2 (a) and (b). Annex I Parties have also accepted emissions targets for the period 2008–12 as per Article 3 and Annex B of the Kyoto Protocol.

BUSINESS AS USUAL (BAU) BASELINE A BAU baseline represents a projection of what would happen without an intervention, and in this instance serves as a benchmark to measure the impact of REDD actions.

BALI ACTION PLAN In December 2007, in Bali, the 13th Conference of the Parties to the UNFCCC adopted the Bali Action Plan describing a two-year process to finalize an agreed outcome in 2009 in Denmark (UNFCCC Decision 1/CP.13). In the Bali Action Plan, the Parties confirmed their commitment to address the global climate challenge by including, *inter alia*, policy approaches and positive incentives on issues related to REDD.

CARBON MARKET Any market that creates and transfers emission units or rights.

CARBON SEQUESTRATION The removal of carbon from the atmosphere and long-term storage in sinks, such as marine or terrestrial ecosystems.

CARBON STOCK The mass of carbon contained in a carbon pool.

CERTIFIED EMISSION REDUCTION (CER) A unit of GHG reductions issued under the clean development mechanism. One CER equals one metric ton of CO₂ equivalent, calculated using global warming potentials recommended by the Intergovernmental Panel on Climate Change (IPCC) and approved by the COP.

CLEAN DEVELOPMENT MECHANISM (CDM) A mechanism established in Article 12 of the Kyoto Protocol and designed to assist non-Annex I Parties in achieving sustainable development and in contributing to the ultimate objective of the UNFCCC, and to assist Annex I Parties in achieving compliance with their quantified emission limitation and reduction commitments.

CREDITING BASELINE As used in this report, a crediting baseline is the reference level against which climate benefits are measured and financial incentives rewarded.

DEFORESTATION As defined in the Marrakech Accords, the direct human-induced conversion of forested land to non-forested land.

DEGRADATION Changes within the forest that negatively affect the structure or function of the forest stand or site, and thereby lower the capacity of the forest to supply products and/or services. With respect to REDD, degradation refers specifically to a reduction in

carbon density.

FOREST CARBON PARTNERSHIP FACILITY (FCPF)

The FCPF is a World Bank program created to assist developing countries in their efforts to reduce emissions from deforestation and land degradation. Objectives include capacity building for REDD activities in developing countries and testing a program of performance-based incentive payments in some pilot countries.

GROSS DEFORESTATION Area deforested in a particular period and zone, not taking into account the area afforested/reforested in the same period and zone.

INDIGENOUS PEOPLES There are no universally agreed international definitions of indigenous peoples, although the term has been defined in certain international legal instruments. According to the United Nations, the most useful approach is to identify, rather than define indigenous peoples. This is based on the fundamental criterion of self-identification as underlined in a number of human rights documents.

KYOTO PROTOCOL A protocol adopted in 1997 under the UNFCCC. The Kyoto Protocol, among other things, sets binding targets for the reduction of greenhouse gas emissions by industrialized countries. The first commitment period of the Kyoto Protocol ends in 2012.

LEAKAGE GHG emissions displacement that occurs when interventions to reduce emissions in one geographical area (subnational or national) cause an increase in emissions in another area through the relocation of activities.

LOCAL COMMUNITIES There is no universally agreed international definition of local communities, although the term has been defined in certain international legal instruments, and with respect to a particular activity commonly

refers to communities within the activity's area of influence.

MARRAKECH ACCORDS Agreements reached at COP-7 that set various rules for "operating" the more complex provisions of the Kyoto Protocol. Among other things, the accords include details for establishing a greenhousegas emissions trading system, implementing and monitoring the Protocol's Clean Development Mechanism, and setting up and operating three funds to support efforts to adapt to climate change.

MRV A measuring, reporting and verification (MRV) process that ensures reliable climate benefit associated with real and measurable emission reductions and enhancement of removals (quantified in tons of CO₂ equivalent).

MITIGATION In the context of climate change, a human intervention to reduce the sources or enhance the sinks of greenhouse gases.

NON-ANNEX I PARTIES All countries that are not listed in Annex I to the UNFCCC or the Kyoto Protocol. Most developing countries are Non-Annex I Parties.

OSIRIS The Open Source Impacts of REDD Incentive Spreadsheet (OSIRIS) is a simulation model used to project impacts of various proposed REDD mechanisms.

PROAMBIENTE Program for the Socio-Environmental Development of Rural Subsistence Production, that has the objective of promoting a balance between the conservation of natural resources and rural family production, through rural environmental property management, integrated planning of production areas and the provision of environmental services. The program arose from a proposal from rural social movements in the Amazon and has as its priority audience subsistence

farmers and traditional communities. There are currently 11 hubs located in the Legal Amazon, involving nearly 4,000 families.

READINESS REDD country actions including a process of policy design, consultation and consensus building, and testing and evaluation for a REDD national strategy, prior to scaled-up REDD implementation.

REDD IMPLEMENTATION PLAN A document that details operationalization of national REDD strategies and can serve as a request for international funding.

REDD NATIONAL STRATEGY A REDD strategy summarizes the policy actions a country plans to take to implement REDD. The REDD strategy reflects the commitment obtained from key actors at the country level in the design of low-carbon development strategies.

REDD REGISTRY A potential future international registry for the issuance of approved REDD units that could be structured similar to the CDM registry and be managed by the UNFCCC secretariat.

REFERENCE LEVELS A reference level is synonymous with a crediting baseline for providing incentives for a participating REDD country if emissions are below that level.

REFORESTATION According to the Marrakech Accords, the direct human-induced conversion of non-forested land to forested land through planting, seeding, and/ or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land.

REVERSE LEAKAGE (OR POSITIVE LEAKAGE) A mitigation activity that results in emissions reduction in areas outside the original mitigation area.

RPPN, RESERVA PARTICULAR DO PATRIMÔNIO NATURAL OR PRIVATELY OWNED NATURAL PRE-serve

The Privately Owned Natural Preserve, or RPPN, is a conservation unit on a private area, created for perpetuity with the main goal to conserve the biodiversity. The creation of a RPPN is a voluntary act performed by the owner, that decides to constitute its private area, or part of it, into a RPPN without compromising its tenure right.

SINK (OR CARBON SINK) A pool (reservoir) that absorbs or takes up carbon released from other components of the carbon cycle, with more carbon being absorbed than released.

SUBNATIONAL ACTIVITY Activities implemented at the subnational level as part of a country's REDD strategy. Subnational activities can be implemented by governments, local authorities, NGOs, or private entities. They may be embedded in a national or international crediting mechanism.

UN REDD A Collaborative Program on Reducing Emission from Deforestation and Forest Degradation in Developing Countries, the UN-REDD Program brings together the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP) in the development of a multi-donor trust fund (established July 2008) that allows donors to pool resources and provides funding to activities of this program.

VERIFICATION Independent third-party assessment of the expected or actual emission reductions of a particular mitigation activity.

VOLUNTARY CARBON STANDARDS Certification schemes for emission credits not regulated under the Kyoto Protocol.

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The Institute for Conservation and Sustainable Development of Amazonas (Idesam) is a non-profit, non-governmental organization founded in 2004 in the city of Manaus, capital of the state of Amazonas. Idesam is an active participant in the UNFCCC's negotiations and conferences, with a primary focus on forests and climate. Our programs and projects are focused on promoting sustainable development and forest conservation in the Amazon and other biomes. We develop and implement projects for Reducing Emissions from Deforestation and Forest Degradation (REDD), as well as capacity building and training courses allied with public policies advisory and monitoring. Idesam believes that valuing standing forests is essential for climate change mitigation and for the maintenance of global hydrological equilibrium.



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TNC works in all 50 American states and more than 30 countries protecting habitats from grasslands to coral reefs. We address threats to conservation involving climate change, fire, freshwater, forests, invasive species and marine ecosystems. TNC uses a science-based approach and pragmatic solutions to conservation challenges. We believe that addressing deforestation must be a part of a comprehensive global climate change solution that addresses all major sources of carbon emissions. The Nature Conservancy's extensive forest carbon work since the 90's has demonstrated that credible methodologies exist to address technical challenges such as leakage, permanence and additionality and that REDD can bring benefits to indigenous and local communities and biodiversity.