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COLOMBIA REDD+ FINANCE AND MARKETS ASSESSMENT

FOREST CARBON, MARKETS AND COMMUNITIES
(FCMC) PROGRAM

MAY 2013

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This report was prepared by:
Terra Global Capital, LLC
One Ferry Building, Suite 255
San Francisco, CA 94111 USA

Authors:

Leslie Durschinger, Founder and Managing Director, Terra Global Capital, LLC
Chris Fowle, Consultant Terra Global Capital, LLC

Supported by Robert O'Sullivan, Finance and Markets Task Lead, FCMC and Terra Global Capital and Scott Hajost, Chief of Party, FCMC and Tetra Tech

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Tetra Tech
159 Bank Street, Suite 300
Burlington, Vermont 05401 USA
Telephone: (802) 658-3890
Fax: (802) 658-4247
E-Mail: international.development@tetrattech.com
www.tetrattechintdev.com
Erik Streed USAID Contracting Officer's Representative
estreed@usaid.gov

Scott Hajost, Chief of Party, Forest Carbon, Markets and Communities Program
1611 North Kent Street, Suite 805
Arlington, VA 22209
Tel: (703) 592-6388
Email: scott.hajost@fcmglobal.org

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ACRONYMS AND ABBREVIATIONS

ANLA	<i>Autoridad Nacional de Licencias Ambientales</i> or National Authority for Environmental Licenses
BMC	<i>Bolsa Mercantil de Colombia</i> or Colombian Mercantile Exchange
BVC	<i>Bolsa Valores de Colombia</i> or Colombian Securities Exchange
CARs	<i>Corporaciones Autónomas Regionales</i> or Autonomous Regional Corporations
CCB	Climate, Community and Biodiversity Standard
CDM	Clean Development Mechanism
CIF	<i>Certificado de Incentivo Forestal</i> or Forest Incentive Certificate
CO ₂	Carbon Dioxide
COMICC	Inter-institutional Commission on Climate Change
CONPES	<i>El Consejo Nacional de Política Económica y Social</i> or National Political, Economic and Social Advisory
DCA	USAID's Development Credit Authority
DNP	<i>Departamento Nacional de Planeación</i> or National Planning Department
FAG	<i>Fondo Agropecuario de Garantías</i> or Agricultural Guarantee Fund
FCMC	Forest Carbon, Markets and Communities Program
FCPF	Forest Carbon Partnership Facility
FNG	<i>Fondo Nacional de Garantías</i> or National Guarantee Fund
FPIC	Free, Prior and Informed Consent
GEF	Global Environmental Facility
GHG	Greenhouse gas
GID	Geographic Information System

ICONTEC	<i>Instituto Colombiano de Normas Técnicas y Certificación</i> or Colombian Institute of Technical Standards and Certification
ICR	<i>Incentivo a la Capitalización Rural</i> or Rural Capitalization Incentives
INCORA	<i>Instituto Colombiano de la Reforma Agraria</i> or Colombian Institute for Agrarian Reform
IDEAM	<i>Instituto de Hidrología, Meteorología y Estudios Ambientales</i> or Institute of Hydrology, Meteorology and Environmental Studies
IWGs	Interdisciplinary Working Groups
JNR	Jurisdictional and Nested REDD+
MADR	<i>Ministerio de Agricultura y Desarrollo Rural</i> or Ministry of Agriculture and Rural Development
MADS	<i>Ministerio de Ambiente y Desarrollo Sostenible</i> or Ministry of Environment and Sustainable Development
MRV	Monitoring, Reporting and Verification
NCCS	Colombia's National Climate Change System
NGOs	Non-governmental Organizations
OTC	Over-the-counter
R-PP	REDD+ Readiness Preparation Proposal (FCPF)
REDD+	Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
REDD+ SES	REDD+ Social and Environmental Standards Initiative
REL	Reference Emissions Level(s)
SFC	<i>Superintendencia Financiera de Colombia</i> or Financial Superintendence of Colombia
SWOT	Strengths, Weaknesses, Opportunities and Threats Analysis
tCER	Temporary Certified Emission Reductions
tCO ₂	Metric Ton Carbon Dioxide
tCO _{2e}	Metric Ton Carbon Dioxide Equivalent
UN-REDD	United Nations REDD+ Programme
UNFCCC	Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VCS	Verified Carbon Standard

VCU Verified Carbon Units
VER Verified Emission Reductions

EXECUTIVE SUMMARY

Colombia has made significant progress in designing and implementing its program for Reducing Emissions from Deforestation and Forest Degradation, conserve, sustainably manage, and enhance forest carbon stocks (REDD+). There is a committed core of participants at the national and local levels, supported by a constellation of international experts from industry and the non-profit world, working toward the development of REDD+ activities. While Colombia is moving toward the implementation of its REDD+ program, there are still a number of key elements needed to support market-based and payment-for-performance mechanisms that can attract private capital at scale.

The objective of this report is to assess and provide advice on Colombia's preparedness for attracting private finance and participation in pay-for-performance and market-based mechanisms for REDD+. The analysis shows that the Colombian government has a relatively high capacity for REDD+, including the technical aspects managed within the Institute of Hydrology, Meteorology and Environmental Studies (*Instituto de Hidrología, Meteorología y Estudios Ambientales-IDEAM*). However, there is a lack of clear and streamlined authority within the government for decision making. This will make it difficult for Colombia to make the key policy and legal decisions to design and regulate their REDD+ program. Likewise, there is no comprehensive budget for finalizing the build-out and administration of its REDD+ program. Since it has been primarily donor funded, the government does not have complete control over implementation and cannot build a stable and permanent staff to administer its ongoing REDD+ program. Colombia does however have a very high potential for financing REDD+ and promoting markets and payment-for-performance. The stream of environmental taxes and fees within the country is a valuable asset that can be leveraged for attracting upfront investment in REDD+ activities. The country has relatively advanced financial regulations and market systems to support the trading of carbon both on a listed and over-the-counter basis.

If Colombia can build the critical missing component of its REDD+ program, it can maximize its participation in market-based and payment-for-performance mechanisms and allow investors to make affirmative investment decisions regarding investing in REDD+ in Colombia. If investors do move ahead and support REDD+ activities in Colombia, the demand side of the equation is not yet ready to absorb a large volume of REDD+ emissions reductions given the slow evolution of international compliance markets that accept forest carbon credits. This is positive, in that it gives the country time to develop measurement & monitoring activities and national versus regional carbon accounting systems. But it is less than optimal for the local communities that need support now in the face of deforestation and degradation.

Methodology

Section 0.3 presents the detailed methodology developed by Terra Global Capital used to assess Colombia's readiness with respect to finance and markets. Using a supply and demand framework tailored to REDD+, it defines the requirements and criteria used to determine Colombia's finance and market readiness. Each section of the paper details Colombia's current state of readiness and provides a prioritized list of opportunities and gaps with a corresponding diagnosis of the relevant limiting factors or constraints.

Findings

Section 2, Law and Policy, focuses on what laws and policies Colombia has in place to support REDD+ mitigation activities at multiple scales, attract new and sustainable sources of funds (private and public) and support market participation (domestic and international). There are a number of readiness elements in place, although the governmental authority over REDD+ decisions is not fully developed and operationalized,

making progress in this area difficult and unpredictable. The high priority gaps identified for Law and Policy include: clarification of the jurisdiction of departments or Autonomous Regional Corporations (*Corporaciones Autónomas Regionales*-CARs); authority to develop REDD+ market-based programs; and developing the laws and procedures for each key land tenure type to secure carbon tenure. This includes a short-term solution that allows REDD+ projects to secure tenure/use of emission reductions for a set time until full laws are developed.

Section 3, Institutional Arrangements, includes the tracking systems and processes needed to manage the REDD+ program in a transparent and auditable manner and support requirements of private investors, payment-for-performance-based finance and markets. While there are a number of key activities underway and Colombia has the experience of managing a robust Clean Development Mechanism (CDM) pipeline, the high priority gaps identified were: i) creation of a comprehensive implementation plan, budget and funding plan for the REDD+ program start-up and on-going operations; ii) development of a national REDD+ activity registration platform; and iii) creation of policies and procedures for offset issuance.

Section 4, Carbon Accounting, evaluates whether Colombia has adopted standards that support spatially explicit carbon accounting, whether reference emission levels are set and whether Monitoring, Reporting, and Verification (MRV) is operational and compliant with international standards. This section does not include a comprehensive MRV and Reference Emission Level (REL) review, but focuses on what investors and markets will require. Investors require that the forecast emission reductions, on which they base their upfront investment decision, will not change significantly once Colombia's fully functioning REDD+ carbon accounting system is in place. Markets will require environmental integrity, but also demand that rights-holder protections are in place. Since the ability to provide a rights holder fair compensation for reducing emissions is critical - either through direct offset issuance or through some pooled benefit sharing program - the carbon accounting will need to be spatially explicit to determine who produced the emission reduction. IDEAM is a very advanced technical organization which is responsible for developing the REDD+ REL and MRV systems. They have made significant progress with estimating national level deforestation rates and are starting on a pilot REL and MRV in the Amazon. To ensure that this work and the work being done by other actors in the country, including CARs, will be consistent and meet international standards, Colombia needs to adopt a set of technical carbon accounting standards for how REL and MRV will be performed in Colombia and make them publically available. Other high priority gaps include making a determination of how departments may move forward with developing their own REL and MRV and indicating through these procedures how projects will be grand-parented within future sub-national and national carbon accounting standards.

Section 5, Benefits Distribution and Rights Holders' Protections, evaluates whether the REDD+ program is designed to ensure that benefits distribution and rights holder protections support the alignment of carbon tenure with land and forest tenure and that management of benefits and distribution of rights are transparent, predictable and auditable. This evaluation does not cover all the aspects of social and environmental protection, but focuses on whether Colombia's REDD+ program aligns benefits from emission reductions with right holders and the deforestation agents. High priority activities in this area call for: i) the national government to continue to engage communities and build local capacity to ensure that the REDD+ program design reflects stakeholder input and protect rights holders; and ii) develop/adopt a set of social and environmental standards that must be applied to all REDD+ projects and programs.

Section 6, Mitigation Activities, identifies REDD+ projects and programs that are underway to provide emission reductions and "learn-by-doing" opportunities at all local, sub-national and national scales where deforestation and degradation drivers are active. Colombia has significant project level REDD+ activities underway, some of which have private sector investors. These and other activities should be promoted, as there need for on-going support of pilot REDD+ activities at local (project) and jurisdictional scales (e.g. CAR or department) levels. Implementation of these REDD+ mitigation activities will provide valuable

emission reductions for Colombia and build capacity of the government, communities, developers, private sector and other participants in REDD+ implementation.

Section 7, Sources of Funds, Financial and Accounting Regulation and Market Mechanisms, finds that the financial and regulatory environment supports the sourcing of public and private funds from domestic and international sources, and that public and private public funds are available to support country readiness and may provide upfront finance for REDD+. This section covers a broad spectrum of financial requirements including availability of funding for REDD+ program development and on-going operations, sources of upfront funds for REDD+ mitigation activities, financial regulation and market infrastructure. Colombia has a fairly advanced market system for securities and commodities and the financial regulations to support investments and markets. One of the high priority gaps is a funding plan for the establishment and operation of all aspects of their REDD+ program (also included in Section 3.1). Additionally, Colombia can play a pivotal role in promoting market-based approaches internationally and domestically which would create demand through voluntary and compliance markets. Colombia also has an important opportunity to use future taxes or environmental fees and royalties to finance projects today, e.g., through municipal bond issuance and insurance products related to REDD+. These should be promoted.

1.0 INTRODUCTION

1.1. OBJECTIVE

The objective of this report is to assess and provide advice on Colombia's preparedness for attracting private finance and participation in pay-for-performance and market-based mechanisms for Reducing Emissions from Deforestation and Forest Degradation, conserve, sustainably manage, and enhance forest carbon stocks (REDD+). To achieve this objective, it uses a number of key requirements to assess Colombia's financial readiness. The key requirements developed for this report are: i) natural resources law and policy to support REDD+ mitigation activities and private capital; ii) institutional arrangements to manage REDD+ activities in a transparent and auditable manner; iii) carbon accounting standards and their ability to measure credits; iv) benefits distribution and rights holder protections; v) current mitigation activities; and vi) sources of REDD+ funds and market mechanisms.

1.2. BACKGROUND

As countries prepare more robust systems to support the measurement and financing of climate change activities, public and private capital flows will continue to increase. The overarching goal is to develop a robust REDD+ mechanism that can finance the estimated \$17 to \$30 billion needed to reduce deforestation by 50 percent by 2020. The way in which the system develops must be in line with the expectations of private investors. In this way, countries will be able to present "investment grade" options to capital providers and market participants that are commercially viable and stimulate investment.

There are large and growing flows of public capital from bilateral and multilateral sources to developing countries' emerging REDD+ systems. However, the sources and especially their uses are not always transparent to even the governments themselves. This opacity creates uncertainty for a private investor seeking to understand all the pros, cons, or risks associated with a potential REDD+ investment. The Forest Carbon Partnership Facility (FCPF) and United Nations REDD+ Programme (UN-REDD) have provided readiness preparation templates and other helpful guidance for countries working on forest finance.

This paper advances the definition of readiness requirements and criteria and applies these to Colombia. This methodology and approach can serve as a model for other country assessments to help governments identify gaps and prioritize REDD+ implementation to promote new sources of finance and market development.

As described in Section 0.3, a finance and markets readiness assessment framework was used to determine the readiness of a country's finance system for supporting REDD+ carbon credit creation and performance-based payment approaches, i.e., the supply and demand aspects of a marketplace. In reviewing any complex system, especially one in development amidst a changing background of political and economic factors, a methodology framework is a helpful tool for understanding its current state, prioritizing activities and measuring progress. Using a market-based economic framework of supply and demand as a model for comparison is a way to rate a country's REDD+ finance readiness and ultimately compare it to systems in other countries.

Table 1 highlights four areas that need to be developed for a market-based¹ system, focused on creating REDD+ carbon credits, to build markets and attract private investment in a sustainable, consistent way:

Table 1: Supply and Demand sides of REDD+ market development

SUPPLY	DEMAND
INSTITUTIONAL FRAMEWORK	PRIMARY CAPITAL
REDD+ host country laws, policies, administrative processes, Reference Emission Levels (REL) and Monitoring, Reporting and Verification (MRV) and tracking systems Sections 2, 3, 4 and 5	Direct funding and risk mitigation tools that support and catalyze early investments Section 7
REDD+ MITIGATION ACTIVITIES	SECONDARY DEMAND
Mitigation activities under government-led programs and projects that are “investment-grade” and provide social and environmental benefits Section 4, 5 and 6	Activities that create end-buyers of emission reductions as well as promote a well-functioning market Section 7

The left two quadrants represent the supply-side of the marketplace. Here the focus is on activities required to support REDD+ program operations that include markets and private finance, as well as activities needed to produce investment-grade emission reductions. The right two quadrants focus on the demand-side of the marketplace and the financing REDD+ emission reduction activities. First are the primary capital markets that provide the initial financing of REDD+ activities. And then the secondary demand, the markets and programs that create demand by the end users of the emission reductions either for compliance, voluntary or other programs that will pay for the emission reduction.

Within each quadrant in the table, the sections of this paper that cover each element is listed. For example, institutional framework is reviewed in Sections 2, 3, 4 and 5. The results of the analysis in the form of prioritized action items for each section are listed below.

1.3. METHODOLOGY AND STRUCTURE OF THE REPORT

To help structure the research and report, an assessment framework was used that was developed by Terra Global Capital to cover the major **Requirements** that a country needs to meet and promote REDD+ finance (private and public pay-for-performance) and markets (domestic and international, compliance and voluntary). For each requirement a set of key **Criteria** was assessed to evaluate the level of readiness that Colombia has achieved with respect to each of the requirements.

The assessment framework and report covers each of the major components of REDD+: Law and Policy, Institutional Platform, Carbon Accounting, Benefits Distribution and Right Holders Protections, Sources of Funds and Market Mechanisms, Mitigation Activities and Market Development and International

¹ Market-based systems may also include other forms of payment-for-performance or results-based payments for verified emission reductions.

Engagement. These criteria fit within four areas that need to be developed for a market-based system, focused on creating REDD+ carbon credits, to build markets and attract private investment in a sustainable, consistent way: i) institutional framework; ii) REDD+ mitigation activities; iii) primary capital; and iv) secondary demand. An overview of the assessment framework is set out in Table 2.

Table 2: REDD+ Finance and Market Readiness Components and Requirements

Section	Readiness Component	Requirement
2	Natural Resources Law and Policy	Laws and policies are in place to support REDD+ mitigation activities at multiple scales, attract new and sustainable sources of funds (private and public) and support market participation (domestic and international).
3	Institutional Arrangements	The institutional arrangements, including tracking systems and processes, are developed and operational to manage the REDD+ program in a transparent and auditable manner and support requirements of private investors, payment-for-performance-based finance and markets.
4	Carbon Accounting	Carbon accounting standards are adopted that support spatially explicit carbon accounting, REL is set and MRV is operational and compliant with standards to allow for spatially explicit accounting.
5	Benefits Distribution and Rights Holders Protections	The REDD+ program is designed and has adopted standards to ensure that benefits distribution and carbon and land rights holder protections support the alignment of carbon tenure with land and forest tenure and that management of benefits and distribution of rights are transparent, predictable and auditable.
6	Mitigation Activities	Mitigation activities are underway to provide emission reductions and “learn-by-doing” opportunities at all local, sub-national and national scales where deforestation and degradation drivers are active.
7	Sources of Funds, Financial and Accounting Regulation and Market Mechanisms	The financial and regulatory environment supports the sourcing of public and private funds from domestic and international sources and public and private public funds are available to support country readiness and to provide upfront finance for REDD+.

The readiness components and their corresponding requirements and criteria were developed with a specific focus on what is needed to promote finance and markets. Therefore, the assessment framework does not cover every aspect of developing a REDD+ program, as many issues have multiple facets. For example, the Law and Policy assessment does not include a comprehensive review of institutional capacity and enforcement. The Benefits Distribution and Rights Holders Protections component does not cover all aspects of stakeholder related issues and engagement, but focuses on the elements most relevant in the context of private finance and market participation. Finally, the Carbon Accounting section does not provide a full technical assessment of the country’s readiness with respect to the carbon accounting system needed for measurement of emission reductions, but rather focuses on what this means for finance and markets.

The report is organized in sections by each component. The beginning of each section lists the requirement needed to successfully promote REDD+ finance and markets for each of the components. The current state of Colombia's readiness is presented in detail for each component. At the end of the section, the primary gaps and opportunities are presented, with an indication of the major constraint in achieving these objectives. This portion of each section is designed to help the government identify and prioritize the work needed and to provide some insight into the main challenges that need to be overcome to achieve them.

The report was prepared via desk analysis, in-person meetings in Bogota during two visits and follow-up telephone interviews. Over 17 interviews were conducted with the Colombian government, The United States Agency for International Development (USAID), non-governmental organizations (NGOs), private sector firms, regulators, investors and project developers.

2.0 NATURAL RESOURCES LAW AND POLICY

Requirement: Laws and policies are in place to support REDD+ mitigation activities at multiple scales, attract new and sustainable sources of funds (private and public) and support market participation (domestic and international)

Criteria

- A detailed national REDD+ strategy is developed and it clearly articulates the allowable financing options and market participation (Section 2.1)
- The governmental structure for decision making and authority over REDD+ program development and management is adopted and operational (across national agencies and between national and sub-national agencies) (Section 2.3)
- Departmental/CAR authorization for REDD+ activities is clear (Section 2.4)
- Land and forest tenure laws support securing undisputed land and forest tenure and allow spatially explicit boundaries to be defined. (Section 2.5)
- Forest-use and related sector policies, are clearly articulated and followed. (Section 2.5.)
- Carbon tenure can be secured for an extended period of time (Section 2.6)
- National government supports state/provincial level market participation (Section 2.7)
- Participation in market-based carbon markets is supported (Section 2.8)

2.1 FOREST POLICY AND USE OF FOREST RESOURCES

The government's policy regarding the commercial forestry industry is one of promotion and subsidy. As an example of the former, a conference was organized in August 2012² to promote international investment in the forestry industry. The government's Forest Incentive Certificate (*Certificado de Incentivo Forestal-CIF*) subsidy program was specifically emphasized as critical for understanding the investment climate for forestry in Colombia. The CIF is one of the subsidies provided by the Ministry of Agriculture under Law 139 of 1994 and Decree 1824 of 1994. Another is a tax exemption on income from new forestry plantations and sawmills under Article 207-2 of the tax statute. The details of each program are promoted by the Colombia Tourism,

² Colombia Forest Investment Conference organized by World Forest Investment, August 13, 2012
<http://www.worldforestinvestment.com/colombia/>

Foreign Investment and Export Promotion office.³ The use of subsidies, such as those established by law, signifies a transfer of financial resources from taxpayers to re-foresters. These subsidies have been justified by the argument that reforestation practices are beneficial to the environment, particularly for soil conservation and erosion control, and as a buffer against climate change.⁴

The Global Environmental Facility (GEF) approved a project in 2010, “Institutional and policy strengthening to increase biodiversity conservation on production lands in Colombia,” designed to refocus the CIF into a mechanism for mainstream biodiversity conservation using forest plantation production practices. The same project hopes to adjust the Rural Capitalization Incentives (*Incentivo a la Capitalización Rural-ICR*) to be more conservation oriented.⁵ The ICR is an incentive program offered by the Colombian government to agricultural producers undertaking new investments to make their operations more modern, competitive and sustainable. The current ICR seems to benefit cattle ranching investors in particular. Overall, the GEF project hopes to influence the adjustment of seven laws related to conservation⁶. The project’s mid-term assessment was expected in December 2012 but draft amendments could not be located at the time of this study. A summary of this GEF project was supplied by the Mercantile Exchange of Colombia in another GEF-approved project, “Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia,”⁷ (referred to henceforth as the GEF Voluntary Mitigation Project) and stated that the CIF and ICR-adjusted subsidies were listed as ‘positives’ in a strengths, weaknesses, opportunities and threats (SWOT) analysis because of the large amount of resources available for reforestation activities⁸.

2.2 NATIONAL REDD+ STRATEGY

The National Planning Department (*Departamento Nacional de Planeación-DNP*) is an administrative department in the executive branch of the government reporting directly to the President. It is responsible for generating National Development Plans that set out development priorities for Colombia. National Development Plans are required under the 1991 constitution and presented by the President within six months of taking office. The DNP’s four year National Development Plan 2010-2014, called “Prosperity for all”, included, among many other matters, climate change as an area of concern for Colombia. After being created by the DNP, the National Development Plan becomes law, detailing the Government’s goals for the administration and how to achieve them. The Prosperity for all plan was enacted as Law 1450 of 2011.

The DNP has a consulting and advisory arm - the National Political, Economic and Social Advisory (*El Consejo Nacional de Política Económica y Social-CONPES*) which provides analysis and generates white papers for all government ministries. Its work – identified by number – can serve as de-facto policy or drive legislative efforts for change in Colombia. *CONPES 3700* outlines Colombia’s National Climate Change System (NCCS) as part of an institutional strategy, including its REDD+ strategy, which evolved from the DNP’s four year plan.

³ “Invest in Colombia - Work, Commitment and Creativity.” Forestry Investment in Colombia. Proexport Colombia. <http://www.investincolombia.com.co/sectors/agribusiness/forestry.html>

⁴ “Republic of Colombia Mitigating Environmental Degradation to Foster Growth and Reduce Inequality,” by Sánchez-Triana, Ernesto, and Kulsum Ahmed. Publication no. 36345 - CO. Washington, D.C.: World Bank, 2006.

⁵ “Institutional and Policy Strengthening to Increase Biodiversity Conservation on Production Lands (PL) in Colombia.” Global Environment Facility, 2010. http://www.thegef.org/gef/sites/thegef.org/files/documents/document/Council%20document_11.pdf

⁶ Law 1151/2007 (PES, payments by municipalities); and Article 14, Law 299/1996 (Property tax exemption).

⁷ “Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia.” Global Environment Facility, 2011. http://www.thegef.org/gef/news/IYF_Voluntary_Mitigation_GHG_Colombia

⁸ The document is a summary of the main objectives of the GEF project. Included in the Strengths section is reference to 260 billion Colombian pesos of ICR to finance reforestation projects. 260 billion Colombian pesos is roughly equivalent to US\$142.5mm.

The REDD+ strategy, outlined in *CONPES 3700*, describes actions required to, “prepare the country technically, institutionally and socially for the implementation of financial and environmental management of the territory that allows it to slow, stop or reverse the loss of forest cover in the country and therefore carbon emissions.” Specifically, the following six action areas are detailed in *CONPES 3700* and translated below:

“First, to establish reliable reference scenario emissions from deforestation at national and sub-national levels as well as a robust national MRV system for carbon accounting. Furthermore, the strategy should prioritize research processes, capacity building and the creation of institutional structures required to establish rigorous and reliable carbon accounts.

Second, REDD+ must have a cross-sectoral approach to the problem seeking communication and coordination between the different productive sectors that generate deforestation and forest degradation.

Third, it should use existing participatory planning approaches involving all relevant stakeholders at national, regional and local levels as the main tool for the proper implementation of the strategy. It should prioritize local resource users, indigenous peoples and local communities, which are essential for proper planning and resource management.

Fourth, look for a governance approach that recognizes the need for management and a vision of the problem nationally, but prioritize decentralization of natural resource management (membership rights, responsibilities and benefits). The strategy must recognize the need for local government and community participation to ensure the operability of the process. This seeks to create opportunities for local actors to be involved in the processes of decision-making for resource management.

Fifth, design participatory, environmental and social safeguards in Colombia, and a system that provides information to relevant groups on how these will be respected throughout the process of implementation of eligible activities.

Sixth, analyze the opportunity costs to implement the eligible activities and design a financial sustainability mechanism with options that include international and domestic finance for both the design and the implementation processes”⁹

The sixth action, analysis of opportunity costs, will be a responsibility of the Ministry of Environment and Sustainable Development (*Ministerio de Ambiente y Desarrollo Sostenible-MADS*) and the Ministry of Foreign Affairs. The design of a financial sustainability mechanism will be the responsibility of a Financial Management Committee, part of the NCCS as described below.

The REDD+ strategy includes providing benefits to indigenous and Afro-Colombian groups to recognize the benefits of ecosystem services their forests provide and to mitigate the risk of forest and biodiversity loss. One of the ways to receive benefits is through access to the global carbon market. In addition, the 2010-2014 National Development Plan outlined further forest-related goals related to developing the legal timber market, improving the management of 1 million hectares of natural forest, formulating a strategy for fighting forest fires and defining a policy for environmental management and land use in the Colombian Amazon.¹⁰

⁹ The Colombian Government’s Department of National Planning’s website is <http://www.dnp.gov.co/>. The *CONPES 3700* document is archived there and can be found by searching for ‘*CONPES 3700*’

¹⁰ Development Plan 2010-2014 “Prosperity for all” (p. 437). <https://www.dnp.gov.co/PND/PND20102014.aspx>

There is even the realization that future products and services with significant carbon footprints could become a barrier to export growth.¹¹

In short, REDD+ is seen by the government as an essential strategy for Colombia and the country's contribution to global efforts to mitigate climate change.

2.3 GOVERNMENT STRUCTURE AND DECISION MAKING AUTHORITY

CONPES 3700 includes the directive to create an institutional strategy around climate change and describes the NCCS as a national coordination system. A national coordination system is a legal concept introduced in Law 1450 of 2011, "National Development Plan, 2010-2014", Article 7. This law was passed in conjunction with the release of the Development Plan 2010-2014. Article 7 is called "National Coordination Systems" and calls for integrated national coordination (not just on climate change) by national and local authorities via a coordinating body. The NCCS will thus have legal status and be allowed to enter into contracts that help achieve the consistent and effective implementation of the policy.

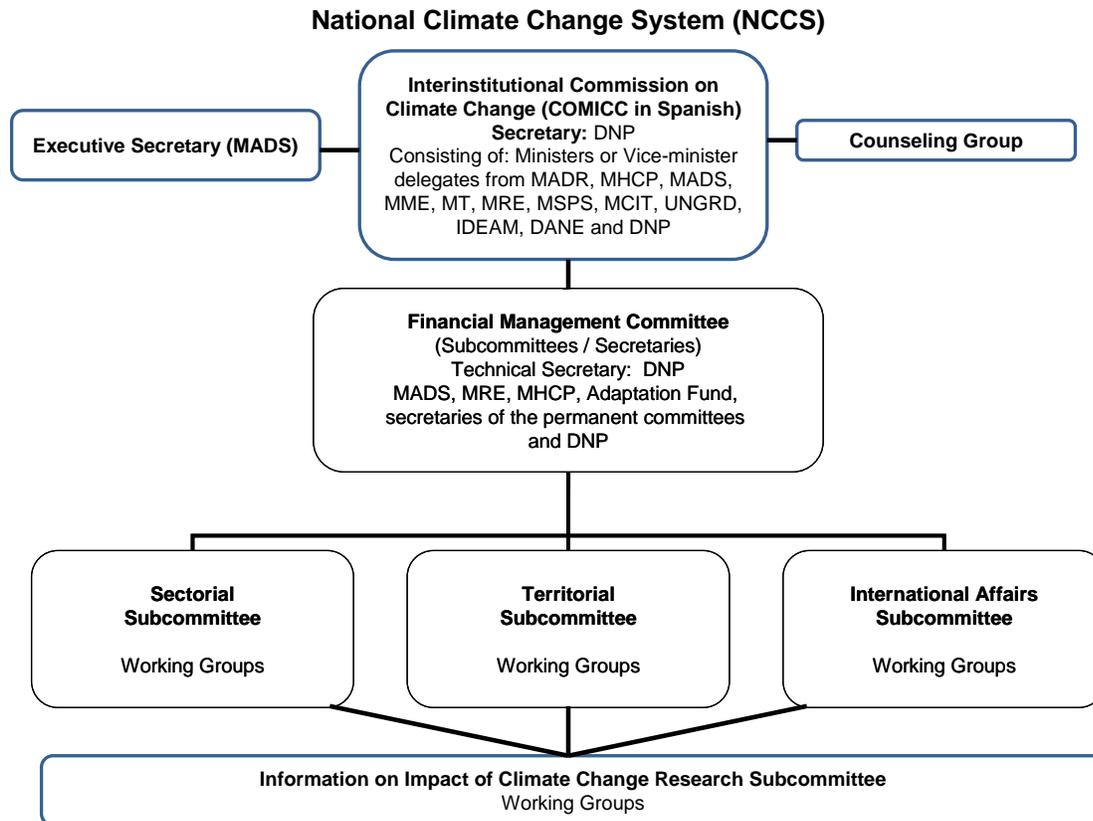
As indicated in Figure 1, the NCCS will be led by the Inter-sectoral Commission on Climate Change (COMICC). The Financial Management Committee will review and analyze program and project proposals from the Sectoral Committee, the Territorial Committee and the Foreign Affairs Committee. These committees will study, collect, analyze and coordinate information and recommendations regarding their respective matters. COMICC is responsible for establishing operating regulations for each committee including: defining its mission; determining its permanent members and their responsibilities; deciding the composition of Interdisciplinary Working Groups (IWGs, known in Spanish as "Mesas de Trabajo") along with their roles and responsibilities; establishing procedures for calling meetings and their frequency and the implementation of decisions along with the reporting and evaluation of their activities. IWGs can be formed either by COMICC or by committees and are the forum for more detailed technical discussions around the development, implementation and monitoring of policy.

The diagrams below show the organizational structure for the NCCS including the IWG specifically for REDD+ situated within the Territorial Committee. The IWG REDD+ will be chaired by MADS who will be responsible for coordinating the national REDD+ strategy on a technical level. The Financial Management Committee will assess the strategy for technical and financial viability; COMICC will structure the final REDD+ strategy, then CONPES will approve the strategy. The Territorial Committee will also govern the participation of the regional climate change nodes, five of which were created in 2009 as part of an effort to decentralize national action and empower local authorities and populations to address climate change¹².

¹¹ Development Plan 2010-2014 "Prosperity for all" (p. 434). <https://www.dnp.gov.co/PND/PND20102014.aspx>

¹² The Colombian Government's Department of National Planning's website is <http://www.dnp.gov.co/>. The *CONPES 3700* document is archived there and can be found by searching for 'CONPES 3700' (page 44)

Figure 1. Colombia's National Climate Change System (NCCS)



As described in the June 2012 FCPF REDD+ Readiness Progress Fact Sheet “The REDD+ IWG[s] will be supported by a series of advisory groups whose role is to help prepare decisions from technical, social, environmental, regional and economic perspectives. It is in these advisory groups that Indigenous Peoples, Afro-Colombian communities and *campesino* communities will have their seat and representation.”¹³

¹³ "Colombia FCPF REDD Readiness Progress Sheet June 2012." <http://www.forestcarbonpartnership.org/colombia>. See also <http://www.minambiente.gov.co//contenido/contenido.aspx?conID=8647&catID=1262>

Figure 2. Colombia's REDD+ Interdisciplinary Working Group for REDD+

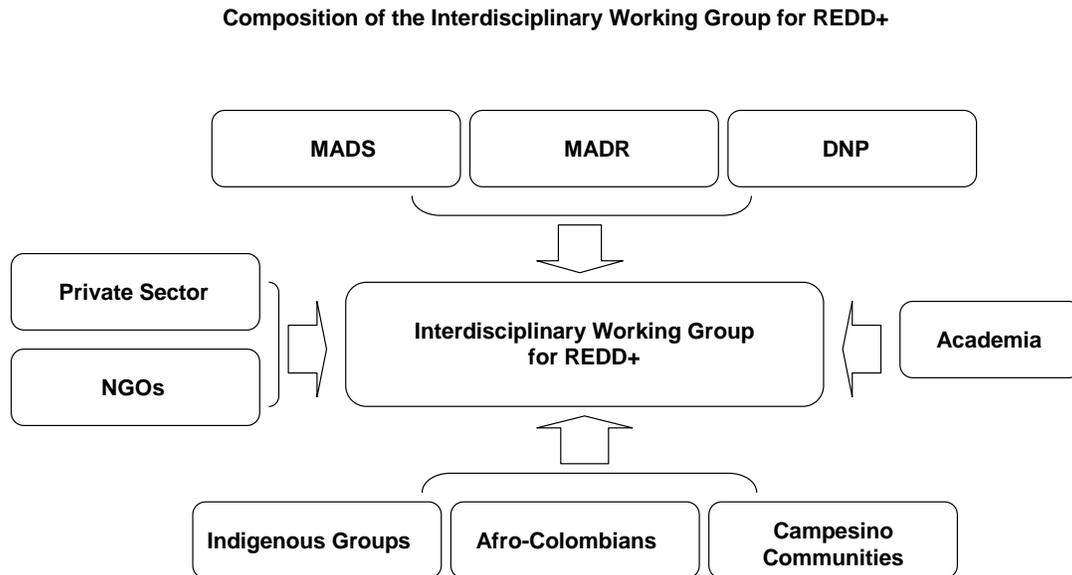
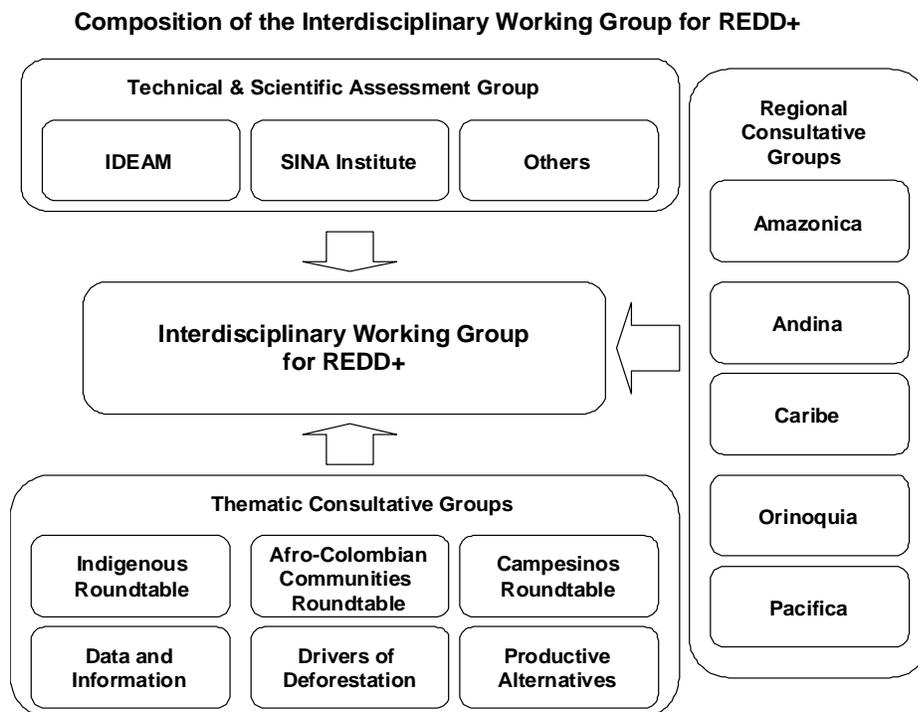


Figure 3 below illustrates additional entities that are part of the structure of the IWG for REDD+.

Figure 3. Colombia's REDD+ Interdisciplinary Working Group for REDD+, continued



The various IWGs, including the one for REDD+, will be pulled together on an as-needed basis to drive consensus-building and leverage resources. Similar attempts at cross-ministerial public-private organizational structures or working groups have been used in the past for coordinating complex issues, such as land

redistribution described in the tenure section below. That experience provides an important lesson for those working on the integration of public and private markets in an effort to harness private investor funding.

The methodology proposed in *CONPES 3700* to coordinate climate change activities across ministries, local authorities, private sector agents and community groups/civil society will likely be cumbersome and not equally supported by all participants. In particular, the need to coordinate between national and local authorities to jointly implement policies, avoid duplication and ensure consistency may prove challenging.

Institutional coordination issues may be complicated as the effects of the United States–Colombia Trade Promotion Agreement start to be understood in practice. It began on May 15, 2012 and over 80 percent of U.S. industrial goods exports to Colombia became duty-free, including wood. In addition, more than half of U.S. exports of agricultural commodities to Colombia became duty-free, including wheat, barley, soybeans, high-quality beef, bacon, and almost all fruit and vegetable products.¹⁴ The Ministry of Agriculture and Rural Development (MADR) promotes soy bean production while MADS advocates for preserving forests; thus there is the potential for misaligned land-use incentives between institutions at the national level.

2.4 DEPARTMENT/REGIONAL LEVEL DECENTRALIZED AUTHORITY

The extent to which the departments have decentralized authority will impact how REDD+ can be developed at the sub-national (department) level. There are three main indicators of decentralization: administrative, fiscal and political.

2.4.1 Administrative

Colombia's institutional framework for environment-related matters is made up of independent regional environmental agencies, Autonomous Regional Corporations (*Corporaciones Autónomas Regionales*-CARs). Each CAR has an acronym which describes the territory they cover. For example, one is known as *Corporación Autónoma regional del alto Magdalena* (CAM) and is the CAR for the Upper Basin of the Magdalena River made up of the department of Huila. For ease of reference we will refer to all of the environmental agencies as CARs. There is almost a one-to-one relationship between the CARs and the departments¹⁵. The CARs are responsible for the management of all natural resources within their jurisdiction. Management activities include granting concessions and authorizations for forest harvesting.

The national-level environmental ministry, MADS, is responsible for overall policy formulation and coordination, and research institutes are responsible for collecting and disseminating environmental data¹⁶. The Institute of Hydrology, Meteorology and Environmental Studies (*Instituto de Hidrología, Meteorología y Estudios Ambientales*-IDEAM) is one of the research institutes created by Law 99 of 1993 that conducts research and collects data needed for public environmental management. It supports both the national government and the CARs¹⁷ by examining, certifying and managing environmental monitoring data generated by the CARs and by IDEAM itself. In addition to IDEAM, there are four other research institutes focused on either specific geographies or scientific specialties. The Humboldt Institute conducts scientific research on the biodiversity of the country including hydrobiology and genetic research. Invemar (José Benito Vives

¹⁴ "Export.gov - FTA - Colombia." United States Government. <http://export.gov/fta/colombia/index.asp>

¹⁵ "USAID Country Profile – Property Rights and Resource Governance – Colombia" http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Colombia_Profile.pdf

¹⁶ "Republic of Colombia Mitigating Environmental Degradation to Foster Growth and Reduce Inequality," by Sánchez-Triana, Ernesto, and Kulsum Ahmed. Publication no. 36345 - CO. Washington, D.C.: World Bank, 2006.

¹⁷ "Republic of Colombia Mitigating Environmental Degradation to Foster Growth and Reduce Inequality," by Sánchez-Triana, Ernesto, and Kulsum Ahmed. Publication no. 36345 - CO. Washington, D.C.: World Bank, 2006. (pp. 38-39)

de Andrés Marine and Coastal Research Institute) conducts marine and coastal research. The Sinchi Amazonic Institute of Scientific Research carries out scientific investigations on matters relating to the Amazon Rainforest, the Amazon River and the Amazon Region of Colombia. The John von Neumann Environmental Research Institute of the Pacific conducts research and investigations on the Pacific littoral and the biodiversity of the Chocó biogeographic hotspot.

2.4.2 Fiscal

For the departments and municipalities, a system of financial decentralization has been in place since 1993. For example, departments and municipalities are entitled to administer their own resources and to collect the necessary taxes “within the limits imposed by the Constitution and the law”.¹⁸ Therefore, the extent of local government taxing powers depends on the terms of the law that authorizes each specific tax. As a general rule, the Congress must define the basic elements of the tax, such as its base and rate. In practice, a range of rates are often established, within which municipalities are free to choose. The same rule applies for fees and special levies (*contribuciones*), with the important exception that the rate can be determined directly by municipalities as long as they follow the procedures established by Congress¹⁹.

Funding for CAR activities is largely self-generated, consisting of different types of taxes and fees. However, the departments are required by national law to provide some funding for CARs. For example, up to 25 percent of municipalities’ property taxes are given to CARs for their environmental management activities²⁰. A 2003 study found that up to 92 percent of total CAR resources were self-generated²¹. Budgetary sources include monies from the national Royalty System (see section 7.3 for a description of the Royalty System, a mechanism for taxing the extraction of natural resources and redistributing the proceeds), fines, a percentage of damages awarded by courts, a percentage of fines imposed by territorial authorities for violations of environmental laws, fees, licenses, permits, authorizations, and concessions²². In some cases, CARs use debt to meet budgetary needs.

2.4.3 Political

The Constitution gives departments, municipalities, and CARs autonomy to plan and administer local policy (in coordination with national planning), pass local decrees and ordinances, and impose taxes that are not transferable to the national government. In practice, depending on their technical and administrative capacities, some CARs operate independently from the department they are aligned with, while others are less effective and autonomous. The Constitution gives Congress the power to create and regulate the functioning of CARs, and specifically requires that they be autonomous²³. In some cases a number of CARs have merged to create more effective entities²⁴.

¹⁸ Colombian Constitution, Article 287

¹⁹ Innovations in Local Revenue Mobilization, June 23-24, 2003. World Bank <http://www1.worldbank.org/publicsector/decentralization/June2003Seminar/Colombia.pdf>

²⁰ Institutional Analysis Of Colombia’s Autonomous Regional Corporations (CARs) <http://www.rff.org/RFF/Documents/RFF-Rpt-ColombiaCARs.pdf> (p. 44)

²¹ Institutional Analysis Of Colombia’s Autonomous Regional Corporations (CARs) <http://www.rff.org/RFF/Documents/RFF-Rpt-ColombiaCARs.pdf> (p. 89)

²² “Republic of Colombia Mitigating Environmental Degradation to Foster Growth and Reduce Inequality,” by Sánchez-Triana, Ernesto, and Kulsum Ahmed. Publication no. 36345 - CO. Washington, D.C.: World Bank, 2006. (p. 64)

²³ “Republic of Colombia Mitigating Environmental Degradation to Foster Growth and Reduce Inequality,” by Sánchez-Triana, Ernesto, and Kulsum Ahmed. Publication no. 36345 - CO. Washington, D.C.: World Bank, 2006. (p. 17)

²⁴ The regional Atlantic corporation (CRA) was merged with the Canal del Dique CAR (Cardique), while La Mojana’s Corpomojana was merged with the Corporación del Sur de Bolívar and the Corporación del Sucre (Carsucre).

Some departments and CARs, given their ability to act independently, are moving forward on REDD+ at a jurisdictional level with the boundary of the CAR forming the jurisdiction as well as supporting REDD+ projects within the jurisdiction. Based on discussions with the government, the CARs (and their related departments) in Antioquia, Huila and Risaralda are moving forward with the early stages of building jurisdictional REDD+ programs. The national government has shown openness to the CARs/departments moving forward with REDD+ program development, but there has yet to be official support or a decree granting either of them specific authority, nor is there a legal analysis showing that they have the authority without the approval of the national government. The question of whether a department or a CAR should be the appropriate unit to implement jurisdictional REDD+ is currently being discussed by the national government.

2.5 LAND AND FOREST LAW AND TENURE

2.5.1 Land/Forest Tenure Legal Framework

The main forest areas of Colombia are inhabited by indigenous communities or Afro-Colombian communities. The June 2012 REDD+ Readiness Preparation Plan (R-PP) draft on MADS' website indicates that these communities hold about 48.8 percent of the country's forests²⁵. As discussed below, the Constitution guarantees communal ethnic groups title to their land. Table 3: Hectares of Colombian Forests by Ownership and Management Type below shows the breakdown of forest ownership by the type of management system. MADS estimates that 26.4 million hectares out of a total of 61.2 million hectares of natural forests are in areas occupied by indigenous communities, and 3.5 million hectares in areas occupied by Afro-Colombian communities. There are 710 indigenous reservations (*resguardos*) in the country. In addition, there are lands held by *campesinos* (the rural poor) which are called Peasant Reservations, six of which were established between 1997 and 2002. Created as part of Law 160 of 1994, "Land Entitlement Rights," the purpose of the Peasant Reservations was to contain the extension of agricultural land-use and provide social justice for the rural poor by providing land and opportunities to develop it sustainably. It is expected that additional Peasant Reservations will be created in the next couple of years.

Table 3: Hectares of Colombian Forests by Ownership and Management Type

Type of Management	Ownership of Territory				Total
	Public	Indian Reservations	Community Councils (Afro-Colombian)	Overlap of Indian Reservations & Community Councils	
2nd Forest Reserves Act of 1959	14,277,297	18,086,339	2,454,660	955	34,819,251
National Parks	5,857,780	3,478,378	2,251		9,338,409
Peasant Reservations	500,999				500,999
Without management category	10,741,317	4,808,647	1,037,996	39	16,587,998
Totals	31,377,394	26,373,364	3,494,907	994	61,246,659

Source: (Translated from the MADS June 2012 RPP draft) Data generated from the map of Continental Ecosystems, Marine and Coastal (IDEAM, et al 2007) and the overlap of information from the official agency responsible for handling each type of management. MADS 2011.

The forest law dates back to 1959 and was updated in 1974 and 1996. In the fall of 2011, a proposal was made to update the legislation again. The new rules would govern the identification, zoning and sustainable management of forest areas, including their development, which are generally overseen by the CARs. The regulation would require CARs to develop forest zoning plans and forest management plans for their regions. The proposed regulation, which groups forests generally into productive forest areas and protected forest

²⁵ "Propuesta de Preparación para REDD (R-PP)" Colombian Ministry of the Environment & Sustainable Development (MADS), June 2012. <http://www.minambiente.gov.co//contenido/contenido.aspx?conID=7007&catID=1195> (p. 28)

areas, also establishes a system of permits, authorizations and concessions for developing forest reserves²⁶. The proposed rules for granting use apply to public and private lands but provide exceptions for indigenous communities using forests for ‘domestic’ use.

The 2nd Forest Reserves Act (Law 2 of 1959) is separate from the National Parks system and doesn’t represent property rights of the state, but establishes a classification and management regime for the lands that fall under its purview including public lands, Indian reservations and Afro-Colombian lands as seen in Table 3²⁷. The National Parks system’s territory is made up of public and Indian Reservation lands which has generated some ambiguity in terms of who has administrative and environmental authority in those areas^{28,29}.

Colombia has one of the most progressive legal frameworks for indigenous land tenure in Latin America.³⁰ Article 63 and 330 of the constitution and Article 6 of Law 70 of 1993, known as, “Recognition of the Right of Black Colombians to Collectively Own and Occupy their Ancestral Lands,” address land ownership. Specifically, communal lands of ethnic groups are “inalienable, imprescriptible and unseizable”. Article 76 of Law 99 of 1993, the “General Environmental Law of Colombia,” states that “The exploitation of natural resources should be done without detriment to the cultural, social and economic characteristics of indigenous and Afro-Colombian communities according to Law 70 of 1993 and Article 330 of the National Constitution and the decisions on the matter shall be made after consultation with representatives of such communities.” Apart from any claims or issues associated with tenure and ownership, local peoples should nonetheless be consulted and have influence over how the resources on their land are used. To the extent those uses differ from the traditional use of the lands, a collective agreement would need to be reached with the local community. This is a *usufruct* concept or, “a right of enjoyment, enabling a holder to derive profit or benefit from property that either is titled to another person or which is held in common ownership, as long as the property is not damaged or destroyed³¹”.

Despite the legal framework that exists for the protection of their land rights and cultural traditions, some sources claim that indigenous and Afro-Colombian communities continue to struggle in the face of State-led security strategies, the mining boom, land restitution efforts and free-trade agreements.³² There have been successes for communities in the past, such as in 2008 when the General Forestry Law of 2006 was struck down by the Constitutional Court because the indigenous and Afro-Colombian communities were not consulted during its development. The law would have created a National Forest Plan to regulate activities related to natural forests and forest plantations.³³ A National Forest Council would have included

²⁶ Latin American Region Environmental Quarterly, January 2012. Beveridge & Diamond P.C., <http://www.bdlaw.com/news-1283.html> and <http://www.bdlaw.com/assets/attachments/Colombia%20-%20Proyecto%20de%20resolucion%20ANLA%2011-24-2011.pdf>

²⁷ “Propuesta de Preparación para REDD (R-PP)” Colombian Ministry of the Environment & Sustainable Development (MADS), June 2012. <http://www.minambiente.gov.co//contenido/contenido.aspx?conID=7007&catID=1195> (p. 95)

²⁸ Laborde, Ramón Esteban. 2007. Los Territorios indígenas traslapados con áreas del Sistema de Parques Nacionales Naturales en la Amazonía Colombiana: Situación actual y perspectivas. Friederich Ebert Stiftung. Universidad de los Andes. Foro Nacional Ambiental. Documento de Políticas Públicas 23

²⁹ “Propuesta de Preparación para REDD (R-PP)” Colombian Ministry of the Environment & Sustainable Development (MADS), June 2012. <http://www.minambiente.gov.co//contenido/contenido.aspx?conID=7007&catID=1195> (p. 94)

³⁰ “Country Case Study: Forest Tenure and Poverty in Colombia” August 2006, Peter Leigh Taylor, Colorado State University

³¹ “Usufruct.” Definition on Wikipedia. <http://en.wikipedia.org/wiki/Usufruct>

³² According to the Norwegian Peacebuilding Resource Center. See http://indigenouspeoplesissues.com/index.php?option=com_content&view=article&id=15886:colombia-stopping-irreparable-harm-acting-on-colombia-s-Afro-Colombian-and-indigenous-communities-protection-crisis&catid=23:south-america-indigenous-peoples&Itemid=56

³³ “Environmental Benefits and the Notion of Positive Environmental Justice.” Journal of International Law 32.3, 2011. University of Pennsylvania Law School <https://www.law.upenn.edu/journals/jil/articles/volume32/issue3/Crawford32U.Pa.J.Int%27L.911%282011%29.pdf>

representatives of government, industry, academia and indigenous and Afro-Colombian groups. The law would also have allowed the use of forest cover as collateral.³⁴

From the perspective of positive environmental justice, the negation of the law by the Colombian high court was a success because the country met standards for peoples' domestic and international rights regarding prior consultation when changing laws relevant to them, especially as they relate to a clean environment. Since the law was struck down, a new law has been proposed to regulate and enforce the right to prior and informed consultation. There have also been a series of attempts to institute a new forestry law. Law 1377 of 2010, "Commercial Reforestation", was proposed by the Ministry of Agriculture and Rural Development to regulate commercial reforestation, but it was also struck down for procedural reasons. As mentioned above, in the fall of 2011, a new forestry law was proposed.

2.5.2 Securing Tenure

The history of land reform efforts, i.e. efforts to clarify and recognize land tenure, stretches back to the 1930s. In 1983, a revised land registration process, or *cadastre*, was instituted. The goal is "an inventory or census, actualised and classified of the buildings belonging to the state and individuals, in order to achieve the correct physical, legal, fiscal and economic identification³⁵", i.e., to have a standardized national methodology to identify all land owners in the country, lot by lot.³⁶ The Geographic Institute provides guidelines for the decentralized land registration system. Although the system is still in implementation phase, a lot of progress has been made, especially in urban areas. The autonomous CARs are contracted to help maintain *cadastre* information with an incentive of 1 percent of the taxes from the corresponding parcel being reviewed³⁷.

Colombia's 1991 Constitution recognizes indigenous ancestral rights over territories traditionally occupied by indigenous groups and Afro-Colombian communities. It makes the national government responsible for demarcating indigenous reserves on public lands and ensuring the protection of land rights of indigenous peoples.

In addition to the tenure system that grants indigenous groups and Afro-Colombian communities rights over the forest, in the 1990s, Law 160, "Land Entitlement Rights," was implemented as a market-based way to redistribute land while legitimizing land titles for campesinos or 'country people'. These locals were to negotiate directly for land of their choosing which they could then purchase, supported by heavy government subsidies. The process was administered by a government agency, the Colombian Institute for Agrarian Reform (*Instituto Colombiano de la Reforma Agraria-INCORA*). This continued INCORA's previous role, begun in the 1960s, of redistributing lands it acquired but also incorporated a new process of more direct involvement by *campesinos* via the market-mechanism. In the end, the program was a failure which may have sensitized some inside Colombia's government to further efforts at market-led changes³⁸ like those proposed for REDD+.

³⁴ "The Elusive Promise of Indigenous Development: Rights, Culture, Strategy," by Karen Engle. (p. 249)

³⁵ "Cadastral System in Colombia." by Christa Stephan, November 2010. <http://www.geo21.ch/ethz/2010/lectures/E4-Colombia-Stephan.pdf> (p. 4)

³⁶ "Colombia: Law, Land Tenure and Gender Review," UN-Habitat, 2005. <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2132> (p. 45)

³⁷ "Cadastral System in Colombia." by Christa Stephan, November 2010. <http://www.geo21.ch/ethz/2010/lectures/E4-Colombia-Stephan.pdf> (p. 4)

³⁸ "Land Reform - Land Settlement and Cooperatives - Special Edition." 02512894th ser. (2003): 73-102. by Grusczyński, D. M., and C. P. Jaramillo. <http://www.fao.org/docrep/006/y5026e/y5026e07.htm>

One of the reasons Law 160 may have failed, beyond budget constraints and the lack of technical assistance to newly titled farmers, was its reliance on a cross-ministry framework for coordination called the SNRA or National System of Land Reform. According to Gruszczynski and Jaramillo³⁹, SNRA consisted of 27 members and six subsystems representing six ministries, the DNP, three of the government's agricultural institutes, presidential programs, campesino organizations, indigenous organizations, agricultural suppliers as well as private agricultural associations. Some land reform experts felt that the cumbersome system was never successful in achieving substantive land reform which is a proxy for resolving at least some of the issues related to land tenure in Colombia.

2.5.3 Overlapping Claims and Illegal Use

Alternative land uses (i.e., illicit crops) have played a role in making tenure more difficult in Colombia. Guerilla movements intertwined with efforts to combat illicit crops have contributed to increased violence which, in recent decades, has affected local populations' use of their land and ultimately changed ownership patterns. Recently, a legal case was decided against a retired Colombian general who seems to have indirectly participated in the death of a local activist, which spurred local populations to leave their land⁴⁰. Subsequent transfers of those lands for the development of palm and banana plantations highlight land tenure issues which would concern international investors. Land tenure issues have not subsided as guerilla violence has diminished. Nine land activists were killed in the first 6 months of President Santos' tenure⁴¹, while 45 were killed in the 5 years prior to his taking office.⁴²

To start fresh and continue to combat land seizures related to armed conflict and illicit crop production, a successor institution to INCORA was created. It is known as the Colombian Institute of Rural Development (*Instituto Colombiano de Desarrollo Rural-INCODER*) and is responsible for issues regarding rural property and the registration for property-loss related to armed conflict. The difficulties faced by displaced people looking to reclaim lost property and gain legal title illustrate the complicated situation and hence the potentially cloudy investment picture for private investors.

There are dispute resolution support efforts guided by the Latin American Institute of Alternative Legal Services in place through programs which try to mitigate issues related to land and housing rights and issues related to forced migration, etc.⁴³

2.6 CARBON TENURE

Ownership of forest carbon and/or mechanisms for the distribution of financial benefits from carbon to support rural poverty reduction drive the development of REDD+ as a way to provide incentives to communities to support on-going forest protection. However, the issue of natural resource rights, especially carbon rights, is still an area that needs finalization in Colombia. The national government is aware of this need to clarify carbon tenure to promote private investment and market participation. There have been various interpretations of land tenure issues as they relate to carbon rights. These include analyses funded by

³⁹ "Land Reform - Land Settlement and Cooperatives - Special Edition." 02512894th ser. (2003): 73-102. by Gruszczynski, D. M., and C. P. Jaramillo. <http://www.fao.org/docrep/006/y5026e/y5026e07.htm>

⁴⁰ "As Colombia jails army general, NGOs combating land grabs should take note" August 12, 2012. The Guardian. <http://www.guardian.co.uk/global-development/poverty-matters/2012/aug/29/colombia-jail-general-ngos-land-grab>

⁴¹ "Colombia shifts from drugs to food in farm expansion," May 23, 2011. Reuters. <http://www.reuters.com/article/2011/05/23/us-colombia-agriculture-idUSTRE74M4OQ20110523>

⁴² "Land and violence in Colombia, This land is our land". Sept 16, 2010. The Economist. <http://www.economist.com/>

⁴³ "Colombia: Law, Land Tenure and Gender Review," UN-Habitat, 2005. <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2132> (p. 45)

non-profits to research legal issues related to carbon tenure, but the conclusions are said to be inconsistent. For example, Ecovera, a non-profit based in Bogota staffed mainly by ex-MADS personnel, prepared a brief⁴⁴ on indigenous and Afro-Colombian communities and REDD+ on the following issues:

- The scope of the existing legal framework regarding land ownership and use of both land and natural resources in indigenous and Afro-Colombian communities in the context of REDD+ strategies and incentives
- The relationship between systems used to manage indigenous and Afro-Colombian communities traditionally and those systems used for REDD+ approvals, etc
- Aspects of land-related decision rights that may emerge after carbon credits are issued

The brief concludes that the current legal framework gives indigenous and Afro-Colombian communities the legal right to use renewable forest resources without the authorization of the state. The brief argues that traditional land use systems will likely conflict with systems used to approve or manage REDD+ projects. This conflict relates to the current manner in which the ‘prior consultation’ approval process occurs within Afro-Colombian and indigenous communities and the belief that this might not be consistent with how REDD+ projects will be approved. Given how complex and divisive the process may be for local groups, there needs to be a new approach to the creation of approvals and incentives, not one modeled on existing environmental licensing systems, etc. As local communities have the right to authorize projects, Ecovera argues that the risk of conflict post-carbon credit issuance over who has the right to determine deforestation and degradation mitigation activities is minimized.

Work to clarify the definition of carbon tenure and carbon ownership continues with MADS, given its critical importance to right holders protection, the success of early action REDD+ projects and the development of a REDD+ program that promotes new sources of payment-for-performance funding and market participation. Another study through the GEF Voluntary Mitigation Project will produce a “legal study...to clarify the scope of current regulations on property rights for carbon in collective territories [indigenous or Afro-descendent groups]; [which] is necessary to avoid uncertainties and future problems, especially for REDD+ projects.”⁴⁵

With regard to carbon resources on those indigenous and Afro-Colombian lands, the government has received numerous inquiries from investors and donors requesting clarification of ownership rights. In response, the government has said it retains rights to below ground natural resources, as is the case with oil. A letter sent in May 2012 referenced a 1974 Law 2811, Article 42, “National Code of Renewable Natural Resources and Environmental Protection,” to support the argument for the national government retaining natural resource rights, but the letter also states that the law is not clear on carbon rights.

The Climate Change group at MADS is working closely with their legal department on a set of guidelines for developers of REDD+ projects to register their projects with the government. Based on a draft of the text for a “resolution that establishes the procedure for registering early implementation activities to reduce emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and increased forest carbon stocks in areas of the country,” the procedures for registering early implementation and carbon tenure would be recognized for a project for a limited period of time. However, this is *not* expected to be a definitive ruling on the legalities surrounding carbon rights because it is difficult to separate carbon ownership from other types of forest assets, like genetic material, an official explained. The

⁴⁴ Corporación Ecovera. Alcance de la propiedad de la tierra y de los recursos naturales en los territorios colectivos y resguardos indígenas en el contexto de estrategias e incentivos de reducción de emisiones por deforestación. Documento PDF.

⁴⁵ “Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia.” Global Environment Facility, 2011. PDF document. See also http://www.thegef.org/gef/news/IYF_Voluntary_Mitigation_GHG_Colombia

goal is to create a way for the indigenous and Afro-Colombian groups engaging in early action REDD+ activities to access funding but not purport to be a complete definition of carbon ownership. Using this process, the government may find a short-term, pragmatic approach to providing clarity on carbon tenure while the longer-term laws and policies are developed.

However, the latest FCPF REDD+ Readiness Progress Fact Sheet states that, “in light of uncontrolled activities by certain project developers, the country will generate an implementation framework suitable for REDD+ activities by establishing a clear regulatory framework in relation to the requirements that must be met by the stakeholders who wish to participate both in future mechanisms (markets or funds). [...], the MADS has a draft of guidelines [for] developers to ensure articulation of individual projects to national strategy, including technical and legal issues.”⁴⁶

2.7 NATIONAL GOVERNMENT SUPPORTS SUB-NATIONAL LEVEL PARTICIPATION

At the national level, MADS is aware of the need to promote department-level program and project-level activities in a rational way. In interviews with MADs they encouraged REDD+ work at the department levels, to promote a learn-by-doing approach and to help them determine how to integrate local activities on a national level. Colombia actively engaged in the development of the new Verified Carbon Standard (VCS) Jurisdictional Nested REDD+ Initiative (JNR) standard through its participation in the JNR Steering Committee, a high level committee tasked with providing guidance and input into the development of the new standards.⁴⁷ While Colombia has not formally adopted JNR as its standard for REL and MRV, its participation in developing JNR, which can support the nesting of departments with the national REDD+ program, gave the government the benefit of understanding the technical issues related to developing a nested REDD+ program where departments/CARs or municipalities programs would roll into the national level.

2.8 GOVERNMENT SUPPORTS CARBON MARKETS

No government is required to participate in the emerging international REDD+ mechanism. However, a country's intention to participate in a REDD+ market mechanism when it is developed can be observed through its actions in international forums and public statements. All indications to date are that Colombia supports carbon markets – and subject to final United Nations Framework Convention on Climate Change (UNFCCC) rules – intends to participate in a future REDD+ market mechanism under the UNFCCC: Colombia is an active participant in the UNFCCC REDD+ negotiations and has been supportive of using carbon markets for REDD+. In a joint submission to the UNFCCC meeting in Bonn, May 2012, Colombia, along with Costa Rica, the Dominican Republic and Peru indicated that, “We have come a long way towards creating the institutional architecture of the international climate regime. This new protocol must include, adapt and improve ongoing institutional and organizational work on adaptation, finance, technology, REDD+, market mechanisms, mitigation and MRV.”⁴⁸ They have also been one of the leading supporters of sub-national and nested approaches to REDD+. If they participate in the FCPF carbon fund they would be using a payment-for-performance mechanism. Colombia has developed a national strategy for reducing emissions from deforestation that indicates Colombia intends to include private finance and market-based

⁴⁶ "Colombia FCPF REDD Readiness Progress Sheet October 2012." <http://www.forestcarbonpartnership.org>

⁴⁷ See Steering Committee participant list at www.v-c-s.org/JNRI

⁴⁸ Ad Hoc Working Group on the Durban Platform for Enhanced Action, First session, Submissions from Parties. Bonn, May 17-24, 2012

approaches in its strategy.⁴⁹ They are also an observer at UN-REDD. Colombia has participated in the Clean Development Mechanism (CDM) and has numerous registered projects. The CDM activities have included a prototype agro-forestry project called San Nicolas⁵⁰ which received investment from the World Bank's BioCarbon Fund. The San Nicolas project is an afforestation/reforestation project under the CDM and will generate Temporary Certified Emission Reductions (tCERs) that will be sold to the BioCarbon Fund⁵¹. Currently, there is one Afforestation and ten Reforestation CDM projects in the pipeline in Colombia⁵².

⁴⁹ The Colombian Government's Department of National Planning's website is <http://www.dnp.gov.co/>. The *CONPES 3700* document is archived there and can be found by searching for 'CONPES 3700'

⁵⁰ "Colombia: San Nicolás Agroforestry." Carbon Finance at the World Bank: BioCarbon Fund
<http://wbcarbonfinance.org/Router.cfm?Page=BioCF&FID=9708&ItemID=9708&ft=Projects&ProjID=9630>

⁵¹ "Colombia: San Nicolás Agroforestry." Carbon Finance at the World Bank: BioCarbon Fund
<http://wbcarbonfinance.org/Router.cfm?Page=BioCF&FID=9708&ItemID=9708&ft=Projects&ProjID=9630>

⁵² UNEP Risoe CDM/JI Pipeline Analysis and Database, December 1st 2012

2.9 NATURAL RESOURCES LAW AND POLICY: GAPS, OPPORTUNITIES AND CONSTRAINTS

Top priority issues for Laws and Policy:	
Gaps/Opportunities (priority)	Constraints/Dependencies
<p>Develop short-term procedures to allow REDD+ project proponents to secure carbon tenure, then develop required laws/decrees that clarify carbon tenure based on land and natural resource tenure</p> <p><i>Priority: High</i></p>	<p>Political will, legal technical support</p> <p>Land and carbon tenure is a priority issue in Colombia from an investors' perspective. Private financing will not risk an ambiguous legal environment and the government has correctly prioritized tenure as an area where clear guidance is needed.</p> <p>Likewise, the government's ability to promote pilot projects and work with communities and international funders signals a strong desire to promote private sector transactions to the international investor community. It is still early, but the government endorsement of REDD+ as a way to channel finance in market-based approaches signals a potentially solid investment thesis in the medium-term.</p>
<p>Clarify the authority for CARs/departments to develop REDD+ programs and how national and sub-national efforts will interact</p> <p><i>Priority: High</i></p>	<p>Political will, legal technical support, institutional coordination</p> <p>The independent nature of the CARs can make it difficult for different CARs and MADS to work together on national policy. This, combined with the fact that forest areas are predominately owned by indigenous and Afro-Colombian – i.e., independent – groups means that working together at different scales (local, CAR, national) can be challenging. Most international funders, and the UNFCCC, are primarily working at the national level, so this further isolates the local players from participating in the dialogue required to advance REDD+ development in a coordinated manner. Continuing institutional changes at MADS may have also contributed to the perception of a 'degree of difficulty' around planning and implementing strategy effectively.</p>
<p>Rationalize forest policy incentives to include</p>	<p>Coordination between national government</p>

<p>local REDD+ activities</p> <p><i>Priority: Medium</i></p>	<p>agencies, political will to change laws</p> <p>There can also be heightened ambiguity caused by competing institutional frameworks which have evolved to support different land use demands like mining, ranching or timber. For example, the Ministry of Agriculture and Rural Development (MADR) promotes the creation of timber plantations using direct monetary incentives in the form of CIFs, an annual \$50 million subsidy for the creation of timber plantations, while there is yet no direct funding mechanism for REDD+ projects. Forest policy and REDD+ policy should be rationalized to avoid perverse incentives whereby one government agency is promoting land development for timber extraction while another is trying to preserve forest lands. The two systems could be combined in a logical way, promoting REDD+ and creating incentives for plantation investors on deforested or degraded land.</p>
<p>Operationalize clear and efficient decision making and authority over REDD+ program development and management</p> <p><i>Priority: Medium</i></p>	<p>Political will, legal technical support</p> <p>The multiple agency national system for climate change, with its working groups and IWG for REDD+ is complex and does not lend itself to prescribing clear and efficient authority on how to implement new laws needed for REDD+.</p>

3.0 INSTITUTIONAL ARRANGEMENTS

Requirement: The institutional arrangements, including tracking systems and processes, are developed and operational to manage the REDD+ program in a transparent and auditable manner and support requirements of private investors, payment-for-performance based finance and markets.

Criteria

- Full implementation and financial management plan (budget and funding) are developed for the REDD+ program (Section 3.1)
- Government taxes, permits or levies for REDD+ activities are defined and aligned with REDD+ cash flows and profit levels but also provide governments with a sustainable funding source to run their REDD+ programs (Section 3.2)
- REDD+ registration and approval processes is defined and operational (Section 3.3)
- Offset issuance mechanics are defined that allow crediting for reductions/removals in a spatially explicit manner for projects and programs and they are supported by formalize carbon accounting and social standards (Section 3.4)
- Rules for permanence and performance pools are established to support environmental integrity of the REDD+ program and crediting to producers of emission reductions (Section 3.5)

3.1 REDD+ IMPLEMENTATION PLAN AND BUDGET

To ensure financial sustainability of their REDD+ program, the Colombian government will need to develop a comprehensive implementation plan and budget for completing the build-out of their REDD+ program infrastructure and to support the administration costs of running the program. While there are a number of REDD+-related initiatives with detailed work plans and budgets underway, Colombia's REDD+ program does not yet have a comprehensive implementation plan and corresponding budget.

Once this implementation plan and budget exist, a funding plan would need to be developed and formally adopted by the relevant agencies. The funding plan would determine how the full budget will be funded and take into account the activities which are currently being funded by other sources. While the legislative bodies and laws are different, examples can be drawn from how California funded the implementation of AB 32.

This program, which had a \$35.2 million implementation budget in 2010-2011, used loans from Motor Vehicle Accounts and the Beverage Container Recycling Fund in the first three years⁵³ to fund the startup. Now that the program has moved into implementation, it is charging an implementation fee that will be used to repay loans and to fund on-going implementation.

3.2 RULES FOR REDD+ TAXES, PERMITS AND LEVIES

Once the costs of implementing and running the REDD+ program are known, Colombia may determine that it should charge a fee to polluting entities and/or on REDD+ activity proponents. Currently, no such plans are in place, but it remains a possibility. Charging for regulatory services in Colombia is an accepted model for generating the necessary funds to administer program infrastructure and staffing. For example, the National Authority for Environmental Licenses (*Autoridad Nacional de Licencias Ambientales-ANLA*), recently issued new rules defining fees related to approving projects in the mining, infrastructure, hydroelectric and other sectors. Under these rules, project developers will be charged for evaluating services (essentially for issuing new and amended environmental authorizations) and monitoring services (for compliance monitoring of existing environmental authorizations). Fees will also be assessed for expert and consulting fees, agency personnel travel and meal costs, development of analyses and studies, and administrative costs (set as a percentage by the agency)⁵⁴.

3.3 REGISTRATION PLATFORM AND OFFSET REGISTRIES

With its CDM history, Colombia has had a strong focus on project-based development and is starting to consider the implications of sub-national jurisdictional frameworks that will further support and coordinate REDD+ activities. Regardless, of what scale(s) Colombia determines it will manage its REDD+ program, given the amount of early action project-based REDD+ activities in the country and the need to account for REDD+ activities being undertaken by specific forest tenure holders for benefit/right distribution, the country will need a registration platform. In the context of this paper, we will use “registration platform” to mean the functions that support registering REDD+ activities, managing any government approvals, collecting/distributing REL and MRV data (which may actually link to another system), possibly a “marketplace” for promoting REDD+ activities in the country, and other functions to support efficient handling of REDD+ information between the government and REDD+ participants. A registration platform can also promote efficient approvals, environmental integrity, transparency, and benefit sharing and support independent verification and validation.⁵⁵ Governments, including Colombia, are starting the process of designing and building registries.

The use of “offset registry” in this paper refers to the platform that supports serialization of offsets that have been issued under a recognized standard(s), account holders’ systems to manage positions and settlements for transactions, and the linking to other registries. When assessing readiness, it is important to distinguish between a registration platform and a true offset registry. An offset registry handles the process of creating (i.e., issuing) offset units with unique serial numbers and supporting the movement of offset units between account holders within the registry and to other linked trading registries. Generally, the issuance process involves the registry confirming the completeness of all 3rd party validation and verification documents and the other required documentation from project proponents, governments (if required), and auditors.

⁵³ California Environmental Protection Agency, Air Resources Board. http://www.arb.ca.gov/cc/adminfee/ab32coi_fee_faq.pdf

⁵⁴ Latin American Region Environmental Quarterly, January 2012. by Beveridge & Diamond P.C., <http://www.bdlaw.com/news-1283.html> and <http://www.bdlaw.com/assets/attachments/Colombia%20-%20Proyecto%20de%20resolucion%20ANLA%2011-24-2011.pdf>

⁵⁵ “National REDD Registries - an Overview of Issues and Design Options” by O’Sullivan, Robert, Thiago Chagas, Jane Lloyd, Charlotte Streck, and Joanna Silver. Climate Focus, 23 June 2011.

Offset registries require high levels of data security and need to support the complete control, integrity, reliability and full recovery of offset issuance and tracking of holdings. They would also link to any trading systems that support transactions in the offset held by the registry. An offset registry for REDD+ has not yet come up in the UNFCCC negotiations. But, it will be a key element in the international architecture of a future REDD+ market mechanism. It may be managed by the UNFCCC (akin to the CDM) or it may also be structured to place the responsibility on participating governments (as is the case for industrialized countries under the Kyoto Protocol). If Colombia is required to have its own offset registry, there are a number of existing registries that can be adapted to support government (national or sub-national) trading registry requirements. Prior to receiving more clarity from the UNFCCC on registries, Colombia can also make use of third party trading registries linked to voluntary market standards. For example, if a REDD+ activity in Colombia is developed and registered under the VCS, it would automatically be registered on one of the voluntary registries recognized by the VCS. This would both record the project and allow issuance and trading of Verified Carbon Units (VCUs).

To support the registration of REDD+ project and program activities with the government, Colombia issued a draft resolution (see Section 2.6) about the creation of a project registration platform for early action REDD+ projects, though it appears unlikely that the resolution will be approved. The resolution was drafted by MADS under its mandate as a policy-setting national ministry. If approved, the process and procedures outlined in the resolution would have served as a set of guidelines for registering early action REDD+ projects, but it was never approved by MADS. Even if it is never approved, MADS feels the process of drafting the resolution was beneficial in understanding the scope of what needs to be done.

Colombia can look to leverage the process it uses for CDM project approvals and tracking as a starting point for tracking REDD+ activities. This includes determining what needs to be approved (including what issues need approval and what documentation is required), the criteria for determining whether approval is granted or not, who makes the approval determination, procedures and timelines for the process, and a mechanism for aggrieved parties to request a review of any decision they felt was wrongly made. Colombia has set out a project approval process for CDM projects, under Resolution 551 of 2009, and MADS keeps track of projects via a spreadsheet system which is not meant to be an accounting or verification tool, just an activity tracking mechanism. It is used to track the designated national authority approvals that are required under the CDM. Such a spreadsheet would not serve as a verifiable audit requirement were one to be required by investors. Likewise, it is not an appropriate platform for an offsets transfer system.

Ideally, the REDD+ activity registration process could be aided by the use of a formalized registration platform and then later with an offset registry. This should also be designed to support tracking of sub-national REDD+ activities to provide a transparent approval process that records and provides public access to all project activities that seek to generate offsets⁵⁶. The rules regarding offset issuance (see Section 3.4) would need to be established prior to implementation of the offset registry. The October 2012 FCPF REDD+ Readiness Progress Fact Sheet states that IDEAM has a platform for registering projects but that it is still undergoing testing. The fact sheet also states that within a year, the government should implement a national registry for REDD+ and voluntary CDM projects to avoid double-counting.

3.4 OFFSET ISSUANCE MECHANICS

The rules and processes for REDD+ offset issuance will be part of Colombia's national and sub-national REDD+ programs. It will be necessary to specify offset issuance rules when adopting standards and

⁵⁶ "An Integrated REDD Offset Program (IREDD) for Nesting Projects under Jurisdictional Accounting", Terra Global. November 2010
<http://terraglobalcapital.com/press/Terra%20Global%20Integrated%20REDD%20Paper.pdf>

developing rules for the REDD+ program. These rules will determine at which scale(s) REDD+ offsets can be issued within the country and who is eligible to receive issued offsets.

Issuing offsets means that the entity receiving the offsets has the ability to control the use and transfer of that carbon asset. There are multiple design options that would allow for offset issuance at national, sub-national and/or project levels. Any system that allowed offset issuance at multiple scales will need to be designed carefully to ensure the accounting at different scales is integrated and the correct number of offsets is issued to the appropriate recipients while maintaining environmental integrity. The VCS recently completed an almost two year process to develop new standards that would allow such integrated accounting and credit issuance. The Chief of the Climate Change Mitigation Group from MADS participated in the standard design through its participation in a steering committee for the initiative.⁵⁷

The question of offset issuance is often lost in the benefit-sharing discussion. The value of carbon offsets can be a large part of the benefits received from sustainable forest management. The issue of who owns the carbon offsets and how they will be managed and distributed from the owner to the local stakeholders must be directly addressed when developing REDD+ program rules.

There is a difference between carbon rights distribution (i.e., defining who can own the offset) and benefit-sharing. Benefit-sharing often involves a stakeholder receiving something of value that is financially managed/controlled by a third party. The benefit is then provided to the stakeholder based on a benefit sharing plan that may or may not be performance-based (i.e., based on how the particular project performs over time by maintaining its carbon stocks). The actual asset, in this case the carbon asset, is owned and controlled by the right holders. Carbon rights distribution can only be facilitated through offset issuance rules.

Therefore, the rules for offset issuance have an impact on rights holders. This is particularly true in Colombia where Afro-Colombian and indigenous land and forest tenure law is strong. For example, if REDD+ rules only allow offsets to be issued at the national level, and the emissions reductions were generated by an indigenous groups' mitigation activities, it would mean that offsets are not issued to (and in the direct control of) that group. While they may pass through a national level benefit-sharing fund or program, this would not be the same as granting the full benefit of owning the offsets.

Given that no REDD+ market standards have been adopted and no REDD+ project approval guidelines are in place in Colombia, offset issuance mechanics have not yet been designed. The processes and procedures for releasing offsets and tracking them over time will have to be well understood for investors to feel comfortable that issuance can be secured for the activities they are investing in and that there is no double-counting of credits or issues related to trading.

3.5 RULES FOR PERMANENCE AND PERFORMANCE POOLS

REDD+ programs will need to have clear rules on establishing permanence and performance pools. Permanence pools are used to ensure the environmental integrity of the REDD+ program in cases where emission reductions are reversed after they have been issued. Often the rules for permanence pools (i.e., how much is deposited for each emission reduction issuance) are specified under the carbon accounting standard. The amount deposited into the permanence (or risk buffer) pool is based on an assessment of reversal risk. Jurisdictional permanence pools, have yet to become operational in any jurisdiction but could be designed such that governments manage their own permanence pools or participate in a commingled permanence pool managed by a centralized market function, such as under the UNFCCC or a standard like the VCS.

⁵⁷ See www.v-c-s.org/JNRI

Performance pools are a new concept being discussed as jurisdictional accounting rules emerge. Performance pools may or may not become part of future jurisdictional REDD+ accounting rules, but they are intended to protect against the loss of emission reductions that occur between two areas within a jurisdictional accounting area. For example, if there is a department that measures emission reductions within its borders, it will only issue emission reductions when the entire jurisdiction has deforestation below the baseline. Further assume that there is a community group in the department that successfully reduces emissions below the baseline on their managed land, but in area outside of their forest there is actually higher deforestation than the baseline that cancels out the community’s emission reductions when measured at the jurisdictional level. In this case, there would be no emission reductions for the community that actually produced the environmental service. Performance pools would be designed to help buffer against this type of “transfer of wealth” that could incur and has the potential to violate rights holders and discourage private investment.

3.6 INSTITUTIONAL ARRANGEMENTS: GAPS, OPPORTUNITIES AND CONSTRAINTS

Top priority issues for Institutional Arrangements:	
Gaps/Opportunities	Constraints/Dependencies
<p>Develop a comprehensive budget and funding plan for implementation and operations of the REDD+ program</p> <p><i>Priority: High</i></p>	<p>Political will, carbon markets and financial technical support</p> <p>The development of Colombia’s REDD+ program thus far has been funded primarily by government and donor funds. This has funded some but not all of the work needed to operationalize the national REDD+ system to the point where it can support tracking of activities, accounting for the emission reductions and issuing emission reduction units that can be transacted domestically and/or internationally. It does not appear at this time that the country (or CARs within the country) have developed and gained legal approval for a comprehensive implementation, budget and funding plan. Without this, Colombia does not have the financial strategy in place to ensure smooth implementation and to make informed decisions regarding the fiscal management of their REDD+ program.</p>
<p>Develop national REDD+ activity registration platform</p> <p><i>Priority: High</i></p>	<p>Financial resources, national project and program registration and approval rules</p> <p>Colombia does not have any registration or approval procedures in place for REDD+ activities being planned or carried out within the country. Concerns have been raised that some individuals or organizations may not be developing REDD+ activities to the standards expected by the government or that activities are unknown to the</p>

	<p>government. There is therefore a need and opportunity to develop procedures for registration of REDD+ activities being developed in Colombia. This process could initially be a voluntary registration and then move to a formal approval process, which may require policy change. There are active discussions currently taking place around the creation of a legislative act – or a resolution depending on legal advice – which will define the best-practices along with guidance on tenure related matters. A national REDD+ activity registry could deliver other benefits such as recording tenure and supporting the government administrative processes.</p>
<p>Create policies and procedures for offset issuance</p> <p><i>Priority: High</i></p>	<p>Political will, carbon markets and financial technical support, carbon tenure rules/laws</p> <p>Once Colombia defines their carbon tenure rules, the question of how and to whom emission reductions may be issued must be addressed. It is through the process of issuance that the carbon asset is created. The entity to which the emission reduction is issued controls that asset. To ensure rights holders’ protections and to support a well-functioning market, Colombia must determine the issuance process for emission reductions as part of developing the REDD+ program. In cases where the offsets are not issued directly to the entity with the carbon tenure, there will also need to be benefit management/sharing rules defined to determine how the offsets are managed on behalf of the rights holder.</p>
<p>Implement an offset registry</p> <p><i>Priority: Medium</i></p>	<p>Financial resources, emission reduction issuance rules</p> <p>A well-functioning market will need to be professionally managed in a transparent, auditable way. It is likely premature for Colombia to develop its own offset registry, but this may not be the best use of resources. If a REDD+ emissions trading mechanism is developed under the UNFCCC, the UNFCCC will develop a set of rules and procedures for crediting. In the interim, Colombia could choose to make use of existing voluntary market registries that it considers credible.</p>

4.0 CARBON ACCOUNTING

Requirement: Carbon accounting standards are adopted that support spatially explicit carbon accounting, reference emission levels are set and MRV are operational and compliant with standards to allow for spatially explicit accounting for emissions

Criteria

- Entities, aligned to support the government, exist with the technical capacity to design, develop, deliver and maintain the carbon accounting required to track net emissions reductions from REDD+ and support rights holder access to carbon (Section 4.1)
- Carbon accounting implementation plan covering all requirements needed for emission reduction issuance under the selected carbon accounting, social standard is developed and funding is identified (Section 4.2).
- Protocols and standards have been developed and/or adopted covering all aspects of REDD+ program design, carbon accounting, and rights holders protections to ensure environmental integrity, transparency, international eligibility and auditability (Section 4.3)
- Deforestation drivers are identified and recent deforestation rates have been calculated to identify priority areas and provide information for development of the carbon accounting system (Section 4.4)
- The carbon accounting system is implemented including; i) setting reference emission levels; ii) monitoring systems for quantifying emission reductions; and iii) supporting crediting and financial mechanisms for benefit sharing are operational (Section 4.5 and 4.6)

Note: The review of carbon accounting readiness in this report is limited to the high level issues that most investors or market participants would require. There is complementary and more comprehensive work being done under the Forest Carbon, Markets and Communities (FCMC) Program and other efforts which support a more detailed analysis.

4.1 TECHNICAL ENTITY

IDEAM is one of five research institutions created within MADS with the role of obtaining and handling scientific and technical information on strategic ecosystems and setting forth the technical basis for zoning and land-use. It performs scientific studies and research on global climate change and its effects in Colombia. Under Colombia's national REDD+ Strategy, IDEAM is leading the work on development of a reference level (component 3) and design of a monitoring system (component 4).

Based on a preliminary evaluation of i) the materials available on IDEAM's website, ii) review of implementation plans for work currently being performed, and iii) one interview with the key team responsible for developing the carbon accounting system for REDD+, it appears there is a high degree of technical capacity within the organization for the work needed to set REL and develop a MRV system. However, it was not clear whether IDEAM has the experience they would need to meet 3rd party international standards and their related validation and verification requirements. There may also be certain key elements of the carbon accounting system, such as the land-use change models, which may require some outside technical support. In addition, much of the work is supported by donor funds while the key elements of the REL and MRV system are not currently being paid for by the government. For example, USAID is contributing at least \$1 million via programs like SilvaCarbon and BIOREDD and the Gordon and Betty Moore Foundation is also contributing a significant amount. This makes it is hard for the government to establish a permanent and trained workforce that will actually carry out the carbon accounting work at a known budget. It also creates a risk that if funding were to stop, key elements of the REDD+ program could be halted due to lack of funding.

4.2 CARBON ACCOUNTING IMPLEMENTATION PLAN AND BUDGET

In support of climate change mitigation activities, IDEAM has a “Phase II” plan which lays out a schedule of activities related to forest inventory and Geographic Information Systems (GIS) data for MRV as well as REL. The plan is part of a project designed to strengthen the technical capacity related to the design, implementation and monitoring of REDD+ projects at the national and sub-national levels funded by the Moore Foundation and implemented by Fundación Natura⁵⁸. The agreement requires that all data, including inputs to the calculations as well as the baselines produced, be published on-line, as has been demonstrated by the documents cited above.

However, there does not appear to be a comprehensive and detailed plan for implementation of a REL and MRV system that would meet international standards and allow for spatially explicit carbon accounting on an on-going basis.

4.3 PROTOCOLS AND STANDARDS

At this time, neither IDEAM nor MADS have selected an internationally recognized carbon accounting standard. However, as listed below in Section 4.4, IDEAM has published a number of documents that are available on their website that provide memoria and protocols on the approaches they are taking to carbon measurement.

There is currently no formalized document on the technical or methodological approach that will be used to build the REL. However, the documents detailed above include deforestation quantification protocols, biomass/carbon estimation protocols, and deforestation drivers and historical deforestation pattern analysis that can support the construction of national and sub-national REL.

In May 2012, the VCS released a set of technical recommendations under their JNR initiative, which were intended to provide guidance to jurisdictions developing REDD+ programs. In October 2012, the JNR requirements were released. They provide a comprehensive framework for accounting and crediting emission reductions and removals from state, provincial and national REDD+ policies and programs as well as individual REDD+ projects. The JNR guidance contains some of the most advanced thinking on the design requirements of jurisdictional REDD+ programs including guidance on REL setting baselines, monitoring, grandfathering, leakage, credit ownership and government approvals⁵⁹. IDEAM, in the pilot REL work being

⁵⁸ “Implementation of a Management and Information Administration Remote Sensing” by R.D. Mateus and M.L. Rodriguez of IDEAM. <http://www.gsdi.org/gsdiconf/gsdi13/papers/108.pdf>

⁵⁹ “Terms of Reference (ToR) – Working Group on Leakage and Permanence in Jurisdictional and Nested REDD+”. Verified Carbon Standard. June 25, 2012.

done in the Amazon (Section see 4.5), have indicated that they will use the nested VCS JNR standard approach. However, there is not an official decision in terms of national implementation of the JNR.

4.4 NATIONAL DRIVERS AND DEFORESTATION RATES

As reported in version 6.0 of the draft REDD+ Readiness Preparation Proposal (R-PP) from June 2012,⁶⁰ Colombia has indicated that the main drivers of deforestation and degradation are farming and livestock, illicit crops, settlement/displacement, infrastructure (including activities associated with energy, road, etc), mining, extraction of timber for sale or self-consumption (including both legal and illegal extraction) and wildfires.

A significant body of work was completed and published by IDEAM in November 2011 in the reports “*Cuantificación de la tasa de deforestación histórica nacional a escalas gruesa y fina*”⁶¹ (“Quantification of the national historical deforestation rate at large and small scales”) and “*Procesamiento Digital de Imágenes, para la cuantificación de la deforestación en Colombia: Nivel Nacional Escala gruesa y fina*” (“Digital Image Processing for quantification of deforestation in Colombia: Nationwide”).⁶² Within these documents, IDEAM details the national level work that was performed to calculate the deforestation rate from 1990-2000, 2000-2005 and 2005-2010 (see Table 4).

Table 4: Average Deforestation Rates over Three Temporal Periods

	1990-2000	2000-2005	2005-2010
Total Forest Cover	2,797,569 hectares	1,575,599 hectares	1,191,365 hectares
Average Annual Loss	279,757 hectares per year	315,120 hectares per year	238,361 hectares per year

Source: Quantification of the national historical deforestation rate at large and small scales. IDEAM. Available at <http://institucional.ideam.gov.co/descargas?com=institucional&name=pubFile8218&downloadname=Memoria%20T%E9cnica%20Deforestaci%F3n%20.pdf>

IDEAM has completed a detailed set of methodologies and results from 2009-2011 on the estimates of carbon in natural forests in the country. The methodology section of the memoria report details the work performed to generate the historical deforestation using mainly fine scale⁶³ (Landsat) data with some

<http://v-c-s.org/sites/v-c-s.org/files/VCS%20ToR%2C%20Working%20groups%20on%20Leakage%20and%20Permanence%20in%20JNR%2025June12.pdf>

⁶⁰ "Colombia FCPF REDD Readiness Progress Sheet June 2012." <http://www.forestcarbonpartnership.org>

⁶¹ “Quantification of the national historical deforestation rate at large and small scales” IDEAM. November 2011. <http://institucional.ideam.gov.co/descargas?com=institucional&name=pubFile8218&downloadname=Memoria%20T%E9cnica%20Deforestaci%F3n%20.pdf>

⁶² “Digital Image Processing for quantification of deforestation in Colombia: Nationwide” IDEAM. November 2011. http://institucional.ideam.gov.co/descargas?com=institucional&name=pubFile8215&downloadname=Protocolo_para_la_cuantificaci%F3n_Deforestaci%F3n_Nivel_Nacional.pdf

⁶³ Please note that section 4.2 of the memoria document which covers the “4.2 Deforestación Histórica Nacional Escala Fina” (fine scale) is incorrectly labeled on the table of contents as “4.2 Deforestación Histórica Nacional Escala Gruesa” (gross scale).

additional input of coarse scale (MODIS) data. It covers the activities from data acquisition, pre-processing, land-use classification, change detection and quantification of deforestation rates. It appears to be very comprehensive, but without a full technical assessment of the procedures⁶⁴. It is not clear whether the procedures used or the results would meet a 3rd party audit against the VCS or internationally recognized carbon accounting standard. There also does not appear to be a formal assessment of the uncertainty associated with the estimates.

IDEAM produced another document "*Procesamiento Digital de Imágenes de sensores remotos para la cuantificación de la deforestación: Nivel Subnacional Escala gruesa y fina*" ("Digital Image Processing of remote sensing for quantifying deforestation: Sub-national")⁶⁵ that complements the national documents and proposes the methodological steps to quantify and monitor deforestation changes in forest cover at regional or local levels. This enables support for REDD+ projects that may yield information that is complementary and integrated with the information at the national level. In the context of this sub-national protocol, the goal is to incorporate sub-national measurement that involves fine scale digital image processing of very high spatial resolution (5m – 1m pixel) to generate information on the distribution, extent and changes in forest cover, according to a spatial scale 1:25,000.

4.5 REFERENCE EMISSION LEVELS (REL)

To spatially measure emission reductions, Colombia will need to create a REL for all areas in the country where it looks to issue carbon credits. To create a REL, there are three main technical elements required: i) historical deforestation rates by forest strata; ii) carbon stock per strata (which is used to develop emission factors); and iii) spatially explicit prediction of future deforestation and emissions based on land-use change models. For REL to be spatially explicit and accurate enough to ensure there is no transfer of wealth between different land managers solely due to the design of the carbon accounting system, each of these three elements must be designed to capture an area's relevant geophysical attributes, deforestation and degradation drivers, land tenure, and the planned REDD+ mitigation activities. Once the REL is established (and validated) it needs to be made available for REDD+ activity developers to determine the feasibility of developing REDD+ emission reductions and then used to produce the verified carbon credits.

Colombia's IDEAM has already produced and released a report on a model of future deforestation and associated greenhouse gas (GHG) emissions⁶⁶. This was done via standard spatial modeling, i.e., determining empirical relationships between spatial patterns of recent deforestation and geographical parameters such as

⁶⁴ "Carbon Stock - Estimation of the potential reserves of carbon stored in aboveground biomass in natural forests of Colombia"

The IDEAM website below links to the following elements of the methodologies:

1. Estimate potential reserves of carbon stored in aboveground biomass in natural forests of Colombia.
2. Estimate of current reserves (2010) Carbon stored in aboveground biomass in natural forests of Colombia.
3. Estimating aboveground biomass using field data and remote sensing data V 1.0.
4. Selection and validation of models for estimating biomass in natural forests of Colombia.
5. Protocol for estimating national and sub-biomass carbon in Colombia.
6. Deadwood: a carbon reservoir of natural forests of Colombia.
7. Estimating carbon dioxide emissions generated by deforestation over the period 2005-2010.
8. Monitoring the water and carbon cycles in high mountain ecosystems (Draft INAP).

<http://institucional.ideam.gov.co/jsp/loader.jsf?IServicio=Publicaciones&ITipo=publicaciones&IFuncion=loadContenidoPublicacion&id=1904>

⁶⁵ "Digital Image Processing of remote sensing for quantifying deforestation: Sub-national" IDEAM. October 2011.

<http://institucional.ideam.gov.co/descargas?com=institucional&name=pubFile8216&downloadname=Protocolo%20Subnacional%20PDI.pdf>

⁶⁶ "Propuesta de Preparación para REDD (R-PP) - Section 3.2.3 - Estimación de las emisiones de GEI derivadas de la deforestación (IDEAM 2011)" Colombian Ministry of the Environment & Sustainable Development (MADS), June 2012.

<http://www.minambiente.gov.co//contenido/contenido.aspx?conID=7007&catID=1195>

See also the IDEAM REDD+ website "Deforestation - Monitoring and tracking the phenomenon of deforestation in Colombia"

<http://institucional.ideam.gov.co/jsp/loader.jsf?IServicio=Publicaciones&ITipo=publicaciones&IFuncion=loadContenidoPublicacion&id=1901>

access, distance to markets, and terrain. IDEAM did conduct ample model comparisons and recognize that their approach could be improved. A recently-approved FCMC activity support an international partnership on modeling international demand for agricultural products, crop suitability and productivity within the country, and economic-incentives analysis that can be merged with their spatial modeling approach.

IDEAM has begun working to develop reference emission levels at two levels: a relatively coarse analysis at the national level and a more intensive and finer-resolution analysis at the sub-national pilot level. The national level analysis was produced via traditional spatial modeling and IDEAM produced the report “*Análisis de tendencias y patrones espaciales de deforestación en Colombia*”. The sub-national pilot is more intensive, involving higher-resolution data inputs, improvements of spatial data such as roads, and collection of information about land-use decision making via farmer interviews. This sub-national pilot is for 7 million hectares in the Colombian Amazon with the goal of considering the key elements of the VCS JNR requirements. The area covers some of the most important national deforestation hotspots. Unfortunately, due to budget restrictions, this will only be a pilot exercise that will not reach the full extension of the Amazon region. However, this exercise will significantly contribute to build national capabilities and it will provide a helpful set of technical recommendations that will be replicable in the rest of the region and in other regions of the country.

The pilot REL expects to evaluate the advantages and disadvantages of a set of models and technical tools currently available to model and project deforestation and emissions. The main tools evaluated will be the Land Change Modeler module of IDRISI Selva⁶⁷ and Dinamica, which includes three different models to undertake spatially explicit land cover change analysis (logistic regression, sim-weight and neural networks). The set of specific explanatory variables (drivers) for the pilot area is currently being diagnosed. However, given the experience acquired by IDEAM after addressing a preliminary national driver analysis, the approach will focus on accessibility (distance and cost analysis). Nevertheless, they are open to test other models to explain the trends in future deforestation.

In work proposed for the coming year IDEAM and partners – which may include the FCMC’s MRV team - will work to improve their studies at both levels. This could include incorporating decision-making information into more-sophisticated models such as those on crop productivity that can inform opportunity cost estimation and modeling of economic incentives for REDD+ participation, e.g., the OSIRIS model.⁶⁸

Currently, Colombia does not have a plan to create pathways from project-based to jurisdictional accounting although the need for such a strategy is clear to MADS staff. However, the government is open to departments developing their own REDD+ programs, including carbon accounting, as a way to inform and supplement the work being done at the national level and by IDEAM.

Some departments, given their ability to act independently, are moving forward in supporting REDD+ project level activities which can help inform and build capacity for future sub-national REDD+ programs. The department of Huila and CAM (Corporación Autónoma Regional del Alto Magdalena or CAM) have been working with ONF International, a French environmental consulting firm, and its Colombian subsidiary office ONF Andina on a pilot project based in a national park in the extreme South of Huila (municipalities Acevedo, Palestina, San Agustín y Pitalito), in the Andean region⁶⁹. The project hopes to establish a baseline

⁶⁷ IDRISI Selva is an integrated GIS and Image Processing software for the analysis and display of digital spatial information.

⁶⁸ The Open Source Impacts of REDD+ Incentives Spreadsheet (OSIRIS) is a suite of free, transparent, open-source, spreadsheet-based decision support tools for estimating and mapping the climate, forest and revenue benefits of alternative policy decisions for REDD+. There are currently a number of OSIRIS tools available, including OSIRIS-International (85 countries), OSIRIS-Indonesia, OSIRIS-Peru, OSIRIS-Madagascar, OSIRIS-Bolivia, and BANTER (Brazil). For more information and downloads see: <http://www.conservation.org/osiris/Pages/overview.aspx>

⁶⁹ "A REDD Pilot Project : Colombia." <http://www.planet-action.org/web/85-project-detail.php?projectId=829>

from which to measure future deforestation, analyze deforestation drivers in a reference zone, develop reference scenarios around what would have happened without the project and design spatial economic models to explain past deforestation and predict it in the future. USAID is also supporting REL activities with IDEAM via its work in Amazonas and the Pacific region as part of the BioREDD+ program described below. Ultimately, the goal is to contribute to the development of a reliable REDD+ methodology and offer additional financial resources to local organizations by selling carbon credits in voluntary markets.

Much of the success to date of the Huila REDD+ project is due to the progressive nature of CAM management and their motivation to bring funding to deforested areas in their region. However, frustration at the local/project level with the length of time required to bring REDD+ on-line is a common reaction, one that needs to be carefully managed.

4.6 MONITORING, REPORTING AND VERIFICATION (MRV)

Once the REL has been established, the next major component needed for carbon accounting is MRV. The MRV work is required on an on-going basis to calculate the actual emission reductions that can be verified and issued. The main elements needed for MRV are: i) deforestation rates during the monitoring period; ii) collection of data required to calculate leakage (unrelated to what is captured in the deforestation analysis); iii) carbon stock data (only as needed to enhance those used for setting REL); and iv) data required for secondary emissions.

The design of a monitoring system (forest area change, accuracy, verification and reporting) was one of the gaps noted in the Country Needs Assessment conducted in mid-2012⁷⁰. And there were three specific gaps highlighted as “high priority”: i) capacity to review, consolidate and integrate the existing data and information (forest inventory, permanent sample plots, REDD+ demonstration activities); ii) use of an independent system to verify data and its interpretation; and iii) institutions or platforms ensuring public accessibility to data and information for transparency and the required capacity to run and maintain it.

On MRV, IDEAM has organized a strong technical team that has made significant progress in forest inventories, land-change analysis and GHG calculations. Colombia is very advanced compared to most Latin-American countries; however, significant additional steps remain. On forest inventories, IDEAM seems to have the necessary capacity and a clear understanding of gaps. These include: additional destructive sampling for allometric studies of certain forest types; additional forest plot surveys; soil carbon surveys; and carbon-stock surveys for key agricultural and pastoral land uses. On land-cover change monitoring, Colombia has produced excellent work, and has even produced a RADAR-based deforestation map for the very cloudy Pacific region to combine with the optical-based deforestation map of the rest of the country. Remaining steps are: conduct a more thorough validation of current estimates; work on methodological improvements, especially in the distinction of fallows from mature forest; and work on methods to use satellite data to estimate or at least target needed field work to measure forest degradation. The latter two points are not unique to Colombia, as all countries are struggling with these issues along with the global remote-sensing research community. Some of this continued work is supported by Gordon and Betty Moore Foundation and SilvaCarbon will also contribute in the coming year. In addition, Colombia has conducted pilots on community-based monitoring, providing hand-held devices and protocols to communities for monitoring certain parameters. This is an aspect of MRV which Colombia will continue to develop, in part via support from FCMC and SilvaCarbon. It should be noted that most countries are experimenting on community-based MRV, as the United Nations has mandated that communities be involved in MRV but not provided guidance on how.

⁷⁰ A draft report was provided to the project team during the field visit in September 2012.

4.7 CARBON ACCOUNTING: GAPS, OPPORTUNITIES AND CONSTRAINTS

Top priority issues for Carbon Accounting	
Gaps/Opportunities	Constraints
<p>Adopt a set of standards and make them publically available for how REL will be set and MRV will be conducted</p> <p><i>Priority: High</i></p>	<p>Political will, carbon markets standards, technical expertise</p> <p>Without selecting a set of standards (even if they are unofficial pilot standards, which may be the case for the pilot Amazon REL work) there is no way for Colombia to plan, budget or implement the carbon accounting required to produce verified emission reductions in a manner that will lend itself to 3rd party review or audit. The issue of standards selection is very political, but a pragmatic approach that provides clear guidance for what should be used (including full documentation of technical requirements), with the flexibility to change the standard in the future as UNFCCC or other international REDD+ standards emerge, will provide a foundation for Colombia to ensure that the technical work is implemented in the most effective manner and that it can meet international standards and external audits.</p>
<p>Make a determination of if/how departments may move forward with developing their own REL and MRV</p> <p><i>Priority: High</i></p>	<p>Political will, legal technical expertise</p> <p>Since it appears that CARs/departments have significant autonomy and authority and some have expressed interest in developing their own REDD+ programs, the national government should clarify whether/how these sub-national programs may develop and indicate future requirements on how these will fit within the national REDD+ program. While this may be difficult to do for all elements of a REDD+ program, it should be specified for REL and MRV, e.g. integrated with IDEAM's work and coordinated among the five regional nodes working on climate change issues at the sub-national level (as mentioned in Section 2.3).</p>
<p>Indicate if/how projects will be grandfathered within future sub-national and national carbon accounting standards (this could be part of adopting standards)</p>	<p>Political will, carbon markets standards, technical expertise</p> <p>With the high level of REDD+ project activities underway to Colombia, including some with private</p>

<p><i>Priority: High</i></p>	<p>investors, the government should clarify how it intends to treat project-level activity within the national (and possibly sub-national) REDD+ programs for accounting treatment and issuing offsets.</p>
<p>Develop and validate spatially explicit REL for key areas that can be accessed for use by all scales of REDD+ activities as the baseline for measuring emission reductions.</p> <p><i>Priority: Medium</i></p>	<p>Financial resources, political will, carbon markets standards, technical expertise</p> <p>Prioritizing this will encourage early action REDD+ activities from multiple stakeholders and ensure that their emission reductions are measured against a baseline that is consistent across a larger area (region/CAR). A system will need to be built to allow stakeholder access to REL.</p>

5.0 BENEFITS DISTRIBUTION AND RIGHTS HOLDERS PROTECTIONS

Requirement: The REDD+ program is designed and has adopted standards to ensure that benefits distribution and rights holder protections support the alignment of carbon tenure with land and forest tenure and that management of benefits and distribution of rights are transparent, predictable and auditable.

Criteria

- Full engagement of stakeholders groups has been undertaken in the design of the REDD+ program (Section 5.1)
- Social and Environmental Standards are adopted to ensure that implementation of the REDD+ programs delivers benefits to rights holders (Section 5.2)
- Benefits and rights are aligned with drivers and agents to ensure that actors needed to produce the emission reductions are incentivized (Section 5.3)

Note: The review of benefits distribution and rights holders' protection readiness in this report is limited to the high level issues that most investors or market participants would require of Colombia. There is complementary and more comprehensive work being done under FCMC which supports more detailed analysis.

5.1 ENGAGEMENT

Colombia has been engaging with stakeholders and preparing communities for further consultation. This includes receiving comments on their engagement activities from the Amazon Indigenous Roundtable on Environment and Climate Change, which was established in the summer of 2012 specifically to have a space for climate change discussions separate from the existing roundtables that bring indigenous people and government together on a wide range of issues. The October 2012 FCPF REDD+ Readiness Progress Fact Sheet states:

"Information dissemination and outreach efforts have been carried out with Indigenous Peoples in the Amazon region, Afro-descendant communities in the Pacific and campesino associations as a way to facilitate participation and prepare stakeholders for a future consultation process. Currently, more in depth consultations are being carried out with Afro-Colombian communities, especially in the Pacific region. Due diligence missions were carried in January, March and April 2012 to look into early dialogue and participation activities carried out so far with key stakeholders at the

*national and regional levels, including Indigenous Peoples, Afro-Colombian Communities, and Campesino communities.*⁷¹

The Strategic Environmental and Social Assessment (SESA) process will not begin until after Colombia completes at least two regional multi-stakeholder workshops (the 1st was completed in the Afro-Descendent area of the Pacific in 2012, and the 2nd will be completed in the Amazon region in June 2013). Detailed plans on management of benefits and rights distribution are not yet under discussion.

Given the importance of stakeholder engagement in local communities, Colombia has created five regions (Pacific, Amazon, Andean, Antioquia and Caribbean) for nested REDD+. The Pacific and Amazon regions are receiving special emphasis since they contain the majority of forested areas, and the FCPF has agreed that these two regions will be piloted first. Fraudulent "carbon cowboy" activities are a concern; a register has been created for private contracts, and other efforts are being made to prevent this phenomenon where unfair contracts between local communities and project developers are made.

In Colombia, the draft registry decree developed by MADS included the following provision: "Article 11. – Safeguards) Respect traditional knowledge and rights of minority ethnic communities, enabling effective participation in the design and development of early implementation activity, based on the principles and criteria established by the Ministry for this purpose."⁷² While this may be part of the draft resolution (see Section 2.6), even if passed, it might not be adequate to meet international social and environmental standards.

FCCM provided technical assistance for a safeguards workshop and carried out stakeholder interview meetings in December 2012. At the stakeholders workshop, which was dominated by people from the Colombian government, there was general agreement that most people in Colombia (including many in government as well as in communities) are still unsure about what REDD+ "is". It was agreed that regional workshops and posting information on the MADS webpage are insufficient to raise REDD+ and climate change awareness. Defining and adopting national safeguards needs to be done in a participatory manner - it is work that needs to be done "river by river" in the countryside, as well as through public awareness raising in Bogota. It will also need to be integrated into the national monitoring and reporting system, so links should be tied between MRV and safeguards. It was also noted by interviewees that while the national roundtable for conciliation with indigenous peoples is a key space, little has been done to socialize and discuss REDD+ in that space, and that is a potential weakness in REDD+ Readiness. The National REDD+ Strategy development will likely incorporate attention to this body as part of developing its National Safeguards System.

5.2 SOCIAL AND ENVIRONMENT STANDARDS

For REDD+ project activities, the Climate, Community and Biodiversity standard (CCB) has been adopted by the industry as the bellwether for measuring social and environment benefits. When combined with the VCS, it is considered to produce a compliance-grade project-based emission reduction that delivers verified carbon credits with social and environmental co-benefits.

Safeguards and standards are both required for Colombia to implement their REDD+ program. Generally, safeguards are the principles and conditions promoted and supported to prevent people and the environment

⁷¹ "Colombia FCPF REDD Readiness Progress Sheet October 2012." <http://www.forestcarbonpartnership.org>

⁷² A draft copy of the registry resolution was provided to the project team by a government official. http://www.minambiente.gov.co/documentos/DocumentosBiodiversidad/proyectos_norma/proyectos/2012/120612_proy_res_emisiones_deforestacion.pdf

from suffering damage and to ensure benefits from REDD+ activities. Social and environmental standards (separate yet related to carbon accounting standards) are technical specifications containing precise criteria that are used as rules and guidelines to ensure/measure the social and environmental benefits generated by the REDD+ activities. The National Safeguard System will include three elements: i) policies, laws and regulations; ii) system information safeguards; and iii) a mechanism to resolve disputes.

The UNFCCC has defined requirements for SESA to be applied to funds moved through the World Bank (using World Bank safeguards) as part of its 2010 report on the Cancun meetings (in Appendix I). Since then, the Subsidiary Body for Scientific and Technical Advice has provided additional recommendations on how to improve the UNFCCC's initial list of directives which are not seen as sufficiently detailed. When asked about the proliferation of social and environmental standards and how Colombia might apply them, a MADS official indicated that one strategy is to use an all-encompassing, strict set of standards for projects and thus meet all possible SESA requirements. However, to date there are no national level standards that must be applied to REDD+ activities, yet FCMC and others are supporting activities related to safeguards and stakeholder consultations to support the development of national safeguards system.

International standards such as the REDD+ Social and Environmental Standard (REDD+ SES) have been designed to support a higher level of social and environmental performance from REDD+ programs. The REDD+ SES standard is being piloted in South America by Ecuador at the national level and by the region of San Martin in Peru at the sub-national level.

5.3 BENEFITS AND RIGHTS ALIGNED WITH DRIVERS AND AGENTS

To align incentives, the social and environmental standards that become part of the national REDD+ program will need to ensure that REDD+ activities address the drivers and agents of deforestation and reward those who produce an environmental asset. The Colombian government has learned that engaging the indigenous, Afro-Colombian and *campesino* stakeholder groups is extremely important since they are the largest forest tenure holders in Colombia. Additionally, once local communities are fully informed of their rights and responsibilities, it will be incrementally more difficult for developers or other actors to create unfair advantages. Colombia has long had a Free, Prior and Informed Consent (FPIC) law and will likely need to build consensus during REDD+ program design and to vet the final program for acceptance. The courts have upheld this FPIC law so this must be taken into account during REDD+ readiness and implementation.

The development of full and transparent benefit-sharing plans that incorporate all the requirements of an internationally accepted social and environmental standard is needed to ensure that rights holders receive fair and equitable access to benefits under the REDD+ program. As it relates to finance and markets readiness, the benefit sharing plans will ideally include a number of key elements (a number of which have been covered in other areas of this report) including clarity on carbon tenure, mechanics on offset issuance and when offsets are not issued directly to rights holders how are the benefits determined and distributed. For market participants and investors it is critical that the government back the rights with vigorous enforcement of the laws and REDD+ program policies and that they make sure that no revenues go astray and that the rights holders on the ground benefit from their REDD+ activities.

Thus far, there has been little or no national discussion of benefits distribution in Colombia. Indigenous and Afro Colombian communities are concerned about benefits distribution and transparency issues. A major concern is that carbon property rights must be clarified, as those rights are the key factor to determine options for benefits distribution. Some people (in government, national NGOs and community federations) have expressed concern about “carbon cowboys” and the possibility of communities being taken advantage of in the absence of government protecting communities from malpractice.

5.4 BENEFITS DISTRIBUTION AND RIGHTS HOLDERS' PROTECTIONS: GAPS, OPPORTUNITIES AND CONSTRAINTS

Top priority issues for Benefits Distribution and Rights Holders Protections:	
Gaps/Opportunities	Constraints/Dependencies
<p>Continue to engage communities and build capacity so that the REDD+ program design reflects stakeholders consensus/ input</p> <p><i>Priority: High</i></p>	<p><i>Financial Resources</i></p> <p>Colombia's unique diversity of cultures and progressive legal framework provide an important opportunity to set a global example of managing benefits distribution and right holder protections. The continuation of community engagement is critically important, with emphasis on building capacity in the communities to manage their resources in the face of continuing armed conflict and production of illicit crops.</p>
<p>Develop/adopt SESA standards that must be applied to the design of the REDD+ program and the activities that generate emission reductions.</p> <p><i>Priority: High</i></p>	<p><i>Political will, carbon market, SES technical experience</i></p> <p>Rules from the development of a set of standards must be applied to all the REDD+ program design and REDD+ activities. These should consider UNFCCC requirements but with the lack of clarity on these, they should leverage other standards such as REDD+ SES, which are operational. In addition, the SESA standard should be linked to the monitoring and reporting system. These will help generate compliance-grade credits to ensure rights holder's protections, align interests and meet the requirements of future compliance systems.</p>

6.0 MITIGATION ACTIVITIES

Requirement: Mitigation activities are underway to provide emission reductions and “learn-by-doing” opportunities at all local, sub-national and national scales where deforestation and degradation drivers are active.

Criteria

- Deforestation drivers and related mitigation costs are understood and provide opportunities for emission reductions by multiple actors at multiple scales (Section 6.1)
- Country is promoting “early action” REDD+ projects and supporting government-led programs that can produce emission reductions under the adopted standards (Section 6.2)
- Country has plans for “program-level” REDD+ activities that can generate emission reductions

6.1 DEFORESTATION DRIVERS AND COSTS UNDERSTOOD

Current areas of focus for DNP staff include developing a land-use model which would demonstrate the impact of economic and other variables on farmers’ decisions regarding the use of their land when there are alternatives, including forest preservation. This would allow the government to understand marginal GHG abatement costs for alternative land-use scenarios aimed at reducing deforestation. One such model has been developed for Brazil⁷³ that incorporates price drivers and competing land use for soy, sugar and cattle. It finds, for example, that given a varying US\$ per ton of CO₂ avoided, land-use changes will be more or less prevalent depending on the prices for soy, sugar and cattle.

To summarize (and simplify) some results from the cited working paper for cattle ranching in Brazil, see Table 5 below which provides a sense of the opportunity cost outputs of this particular model (whose complete assumptions can be seen in the paper itself). As the assumed price of cattle increases by 10 percent, the net present value of the return from the land is compared to REDD payments under four price scenarios, 0, 5, 10 and 20. The second column represents estimated gains (as measured in net present value) from REDD+ per hectare in Brazilian Reais. The results are less forest reduction and pasture use for cattle ranching, as seen in columns 3 and 4, Change in Forest Hectares, etc. This is the type of land-use models that help the government make decisions regarding land use, REDD eligibility and allocation of enforcement resources.

Table 5: Example of Modeling Impacts on Land-use for REDD+ and Cattle Prices (Brazil)

⁷³ “Deforestation in Brazilian private lands: An empirical assessment of land use changes within farms”, by David R. Heres, Ramon Arigoni Ortiz and Anil Markandya” August 2012.

Impacts of a REDD Program on a Typical Municipality in Brazil

Impact of a 10% expected increase in the price of cattle

Price of CO2 Under REDD	Gain from REDD R\$000/Ha.	Change in Forest Ha.	Change in Pasture Ha.
0	0	-678	1,012
5	8.037	-272	606
10	16.075	-117	451
20	32.149	-34	369

Source: "Deforestation in Brazilian private lands: An empirical assessment of land use changes within farms, by David R. Heres, Ramon Arigoni Ortiz and Anil Markandya" August 2012

The DNP staff said in interviews that they believe Colombia has four-times the amount of cattle ranching it should and significantly less forest cover than it should when you look at the optimal land allocation from an economic point of view. A model such as the one produced for Brazil would help support transition matrices at the local level to show the “best land use” in a given area. Many similar models have been created - for example, the Open Source Impacts of REDD+ Incentive Spreadsheet for Indonesia (OSIRIS-Indonesia), is a free tool designed to support decision making related to REDD+⁷⁴. Such a model could be used to set policy priorities, change regulations and determine nationally appropriate mitigation actions. At the same time, DNP knows that the issue of illicit crops cannot be easily resolved as many of the areas with the highest potential for REDD+ projects may also serve the market for illegal activity.

Land-use models are one way to help the government inform policy regarding the opportunity costs of land use. The DNP has on their to-do list the creation or adoption of an appropriate methodology for deciding which land is best suited for a particular use and the opportunity costs associated with making any necessary changes to land-use planning and land-use laws. However, there will need to be strong communication and coordination strategies (with IDEAM) employed to design, assess impacts and make those changes, but none currently exist.

6.2 PROMOTING EARLY ACTION REDD+ PROJECTS

A number of non-profits in Colombia and abroad have joined forces to support the creation of a viable model for REDD+. One of the primary ways they have come together is through the Mesa REDD+, or REDD+ Roundtable, a kind of roundtable dedicated to advancing strategies for REDD+, consistent with the rights of indigenous, Afro-Colombian and other local communities, equitable generation and distribution of benefits and the sustainable management of forests.⁷⁵ While the roundtable itself cannot demonstrate actual project development progress, some of its members, especially USAID, are heavily involved in developing projects, as described below. Examples of actual REDD+ projects under way or being considered are listed below.

- USAID is financing a regional or state level program called BioREDD+ which has been contracted to Chemonics. The three main areas of focus are climate change, preservation of biodiversity and environmental management. Nineteen municipalities in five states are targeted for action to preserve the dry tropical forest in Colombia. The program is supporting the development of up to 22 REDD+ projects in the Pacific Coast involving 53 indigenous and Afro-Colombian communities. Preparatory activities cover socialization and capacity building, social and economic assessment, MRV/REL development and methodological development for product registration. The total project

⁷⁴ “OSIRIS-Indonesia, Decision support tool for national REDD+planning.” www.conservation.org/osiris

⁷⁵ Mesa REDD Colombia website. <https://sites.google.com/site/mesareddcolombia/>

area covers around 1.7 million hectares and total beneficiaries number more than 100,000. The project timeline extends through October 2014, by which time it is anticipated that no less than 8 of the 22 projects will have achieved registration via the VCS and CCB standards. These projects will have also entered into agreements with international private sector investors for purchasing emission reductions.

- The San Nicolas Agroforestry project, developed by the Corporation for Sustainable Management of the Forests (*Corporación para el Manejo Sostenible de los Bosques-MASBOSQUES*), is establishing forestry and agroforestry systems on 2,500 hectares of abandoned pastures in the eastern part of the Department of Antioquia. It also hopes to avoid further deforestation and encourage reforestation in 7,300 hectares of remnant forest in the San Nicolas valley. The project is supported by the World Bank's BioCarbon Fund and is also supported by the sale of other environmental services, for example under CDM. The BioCarbon Fund intends to purchase 280,000 tCERs from the Project, measured in tons of carbon dioxide equivalent (tCO₂e) and 317,000 tons of emission reductions resulting from avoided deforestation, measured in tCO₂.⁷⁶
- The Choco-Darien 13,465 hectare project is located in Colombia's Darien region, near the border with Panama. The developer is Anthroctect, led by its founder Brodie Ferguson, who works with the Council of Afro-Colombian Communities of the Tolo River Basin, which holds collective land title. It has achieved VCS (as of November 2012) and CCB Gold Level certification and hopes to prevent 2.3 million tCO₂ over 30 years.
- The French Fund for the International Environment granted a four-year project funding amount of €1.46 million to help develop three pilot projects in the Magdalena river basin designed to access funding via either CDM or REDD+⁷⁷. The funds will be provided in combination with other donors to accumulate a total of Euro10mm.
- Other potential REDD+ projects, as listed in GEF project documents, include:
 - Jardin Botánico del Pacífico in Choco. 2.1 – 3.9 million tCO₂
 - Huila. 1.6 – 3.1 million tCO₂
 - Yurumanguí REDD in Valle de Cauca.
 - Corredor de conservación Guantiva
 - Darien Caribe Colombiano
 - Deforestación Evitada in Choco
 - Asociación Lazo Verde del Rio Melua
 - Magdalena Medio in Antioquia
- The Forest Carbon Portal inventory also lists the following project, not yet mentioned above:
 - Pachamama to be developed by Pachamama Forest Ltd.

⁷⁶ "San Nicolas Carbon Sequestration Project," <http://www.forestcarbonportal.com/project/san-nicolas-carbon-sequestration-project>

⁷⁷ "Colombia - Developing CDM and REDD Potential for Sustainable Development in the Rio Grande De Magdalena Basin." The French Global Environment Fund (FFEM), 6 July 2011. http://www.ffem.fr/lang/en/site/ffem/accueil/projets/projets_ffem-par-secteur/Projetschangement-climatique/CC01016-Colombie_REDD+-Magdalena

6.3 “PROGRAM-LEVEL” REDD+ ACTIVITIES THAT CAN GENERATE EMISSION REDUCTIONS

While indications are that some of the CARs are beginning to develop sub-national programs, there are none that are operational at this time, nor is it clear what types of REDD+ program activities they would undertake that could generate verified emission reductions. That said, there is significant scope for the national and regional-level governments to design and implement programs that could be eligible for crediting under the defined REDD+ program(s). Additionally, the scale of the BioREDD+ program on the Pacific Coast funded by USAID, could be considered a REDD+ program as it covers a significantly larger geophysical region and is looking to use a consistent approach to setting the baseline that could be used for numerous projects in the region.

6.4 MITIGATION ACTIVITIES: GAPS, OPPORTUNITIES AND CONSTRAINTS

Top priority issues for Mitigation Activities:	
Gaps/Opportunities	Constraints/Dependencies
<p>Support pilot REDD+ activities at local (project) and jurisdictional scales (e.g. CAR or department)</p> <p><i>Priority: High</i></p>	<p>Financial resources for the up-front cost to implement REDD+ mitigation activities</p> <p>Colombia has continued to promote early action REDD+ activities by sourcing donor funds that promote sustainable forest management. In the absence of a private funding market, these early action activities are critical to building the capacity for a more robust hybrid or private market in the future. While there is a pipeline of REDD+ projects, it could be made more robust by proactive state sponsorship of pilot projects and jurisdictional schemes.</p>
<p>Develop models to understand opportunity costs for alternative land use scenarios that reduce deforestation</p> <p><i>Priority: Medium</i></p>	<p>Financial resources, technical support</p> <p>Land-use models will help build the case for alternate land uses and the appropriate pricing of forest products including carbon. These models will help Colombia set policy that integrates economics and emissions into the decision process.</p>

7.0 SOURCES OF FUNDS, FINANCIAL AND ACCOUNTING REGULATION AND MARKET MECHANISMS

Requirement: The financial and regulatory environment supports the sourcing of public and private funds from domestic and international sources and public and private public funds are available to support country readiness and to provide upfront finance for REDD+

Criteria

- Funds are secured to finance key country readiness and implementation requirements (Section 7.1)
- Loan programs and/or debt issuance and guarantee programs are being leveraged to support REDD+ finance (Section 7.2)
- Payment-for-performance programs are designed and leveraged while interim market demand emerges (Section 7.2)
- Domestic institutional investors have capital, mandate and appetite to invest in REDD+ (Section 7.2)
- Risk mitigation measures have been promoted for REDD+ investment (Section 7.2)
- Domestic programs for environment fees (taxes) are designed to provide REDD+ funding (Section 7.3)
- Financial and accounting regulations promote private investments (domestic and international) in REDD+ and markets (Section 7.4)

7.1 FUNDS SECURED TO SUPPORT REDD+ PROGRAM READINESS, IMPLEMENTATION AND ON-GOING OPERATION

7.1.1 REDD+ Program Implementation and Operational Funding

Colombia has developed and revised its R-PP within the framework of support received by the FCPF. The 6th draft of the R-PP⁷⁸, which is the latest version after the previous R-PP was approved in Berlin in October 2011, is available in Spanish only on the MADS website. Version 6 includes the following activity priorities and gross budget estimates:

- Capacity strengthening among relevant stakeholders
- Structuring and/or adjustment of the institutional, regulatory and technical framework that enables the implementation of REDD+ activities
- Development and/or coordination of vegetative cover and carbon stock monitoring protocols
- Identification of possible social, environmental and economic impacts in the implementation of REDD+ projects
- Construction of a participative national REDD+ strategy

The estimated total budget in the proposal is \$18.5 million and the anticipated funding sources are: \$3.6 million from the FCPF, \$4.0 million from UN-REDD, \$1.4 million contribution from the national government and \$9.7 million from other sources. And while priority activities have been defined and budget allocations estimated, the actual funding for the above has not yet fully materialized.

UN-REDD⁷⁹ sponsored in-depth reviews of six countries' REDD+ readiness which were presented in Santa Marta, Colombia in June 2012. The report for Colombia highlighted (as yet unfunded) budget priorities for REDD+ implementation projects totaling \$755,000.

The activities include:

- Mechanism/Long term Capacity Building program (\$400,000)
- National REDD+ expert meeting (\$20,000)
- REDD Experts for Departments and Regional Autonomous Corporations (2 years) (\$65,000)
- Support Program for REDD+ projects Fraud prevention for the MADS. (\$70,000)
- Studies to determine the economic impact at Regional and national level of the different REDD+ scenarios under the REDD+ National Strategy (\$200,000)

The October 2012 FCPF REDD+ Readiness Progress Fact Sheet⁸⁰ complements the information in the full UN-REDD+ review and reports that Colombia is currently in talks with UN-REDD for a full partnership with this program in the near future.

There are other key sources of funding that will support Colombia in implementing their REDD+ program. During a meeting with MADS staff, a new project being funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety under Germany's "International Climate Initiative,"

⁷⁸http://www.minambiente.gov.co/documentos/DocumentosBiodiversidad/bosques/redd/documentos_interes/080612_colombia_rpp_version_06.pdf

⁷⁹ "The UN-REDD Programme Blog." <http://unredd.wordpress.com/>

⁸⁰ "Colombia FCPF REDD Readiness Progress Sheet October 2012." <http://www.forestcarbonpartnership.org>

was mentioned and will include a component for piloting a nested jurisdictional accounting approach along with institutional capacity building and coordination and a registry. This work will be carried out by Winrock International and Climate Focus.

As mentioned in Section 6, USAID is financing the BioREDD+ program. At the national level, three main areas of focus are climate change, preservation of biodiversity and environmental management. The total BioREDD+ budget is at least \$28 million. The principal objectives are to support the government of Colombia, the private sector and citizens to achieve peace, promote economic prosperity, promote social development options and economic alternatives to illicit crops and strengthen the presence and effectiveness of the state⁸¹. The BioREDD+ project is also working beyond the national level with a focus on the Pacific coastal region of Colombia. Objectives include: reducing or mitigating the negative impact on biodiversity and strategic ecosystems in Colombia; strengthening governance for the conservation of protected areas; ethnic territory preservation; restoration and enhancement of environmental services; ensuring the sustainability of livelihoods; reducing or mitigating vulnerability to the long-term effects of climate change; and promoting the use of clean, renewable energy.

While prioritization and initial pro-forma budgeting work has been completed, national funds are not yet in place for full implementation of REDD+. International donations are still the primary source of funds for REDD+ implementation activities. One of the largest costs of REDD+ infrastructure implementation is the development of the REL and building the on-going MRV systems and processes that can be used for carbon accounting under payment-for-performance and market-based programs. The government indicated that they will look to leverage both the REL and MRV work being done at the national level, but recognize the value and need for carbon accounting at the regional/departmental level. But based on the discussions with IDEAM, who is starting the REL and MRV work in the Amazon region, the funding is only there to cover a portion of this priority region.

Currently, no results-based financing mechanisms are included as a condition of international and/or multilateral funding. These types of arrangements have been used by bilateral and multilateral funders to ensure benchmarks are met using pre-agreed performance metrics as the determining milestones.

7.1.2 Other REDD+-Related Readiness Funding

An example of a multilateral source of funding is the GEF Voluntary Mitigation Project being executed by Fundación Natura. There are five pilot REDD+ projects included, in addition to market-enabling work streams, such as the development of a trading platform and credit lines for carbon finance. Total project funding including co-financing, is \$10.6 million.

The Ecosystem Marketplace has implemented a REDD+ funds tracking project for a number of countries, including Colombia⁸². The goal is to provide a comprehensive view on the amount of funds promised and actually funded for REDD+ projects in the participating countries. This effort responds to the difficulty market promoters were having in obtaining a transparent view on all REDD+ donor funding globally.

⁸¹ USAID BIOREDD+ website. <http://www.bioredd.org/s/QUIENES-SOMOS>

⁸² "Tracking REDD+ Finance: Separating The Payers From The Posers." Ecosystem Marketplace, 13 Aug. 2012. http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=9211§ion=news_articles&eod=1

7.2 SOURCES OF UPFRONT FINANCING FOR REDD+ ACTIVITIES

7.2.1 Domestic Bank Loans

Bancoldex, Colombia's Bank of Foreign Commerce, is a state-owned commercial bank incorporated as a public-private bank. It operates under the same legal regime as private sector financial institutions. As a wholesale bank which provides funding to other banks in the Colombian financial system, Bancoldex has the opportunity to influence the types of loans and investments made. Some of their focus areas are commerce, tourism, industry and microfinance (or small medium enterprise finance). They do not have an active agriculture or timber-related portfolio. With regard to sustainable development projects, they have launched loan instruments for renewable energy projects like solar as well as water treatment, water management and recycling. That portfolio is currently at around \$15 million. They are also providing training to financial institutions.

Bancoldex is named as a strategic partner in the GEF Voluntary Mitigation Project. The stated goals of the project are: "(i) increasing the effectiveness of climate change policymaking by strengthening coordination between various institutions which form part of the public policy framework against climate change in Colombia; (ii) mobilizing and leveraging a greater amount of climate finance (including international public finance sources such as the Clean Technology Fund (CTF)) and technical cooperation resources in support of low-carbon projects; (iii) increasing the capacity for structuring financial lines according to low-carbon investment needs of different economic sectors; (iv) promoting a discussion on applicable standards for GHG accounting and corporate social responsibility; and (v) supporting the domestic financial sector to become more proactive in climate finance."⁸³

Regarding REDD+ finance, a Bancoldex official indicated during a discussion that constraints to lending for REDD+ projects currently include:

- Intermediary or Tier 1 banks don't understand REDD+ projects or the carbon market. Intermediary or Tier 1 banks are those that lend funds directly to the public, individuals or corporations, for example. A Tier 2 bank would be a public bank that channels funds to the Tier 1 banks who then lend directly to the public.
- The regulator, the Financial Superintendence of Colombia (*Superintendencia Financiera de Colombia-SFC*), doesn't accept VCUs as collateral. See the Regulation section below for more on the SFC, which is roughly equivalent to the U.S. Securities and Exchange Commission. If VCUs are not acceptable collateral for financial transactions, there is less reason for banks or other financial intermediaries to use them.

As a result, the official's opinion was that education on carbon markets was needed for financial institutions, and that new loan lines designed for REDD+ by the Tier 2 banks, like Bancoldex, should be offered on a pilot-project basis. There would need to be a regulatory opinion on carbon finance provided by the SFC.

Another type of pilot program suitable for Bancoldex or others is a revolving fund for REDD+ project set-up. This would be a loan fund available for covering the up-front costs of setting up REDD+ projects. The fund is revolving because as the funds are repaid, they become available again to help set-up new projects. REDD+ projects typically take two to four years to reach a break-even point where they are able to begin to pay back the initial investment, so the loans would need to be at least that long.

⁸³ "Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia." Global Environment Facility, 2011. http://www.thegef.org/gef/news/IYF_Voluntary_Mitigation_GHG_Colombia

Banco Agrario, formed in 1999, is a successor organization to the Caja Agraria, a development bank focused on stimulating growth of the agricultural sector. It was the bank used to facilitate the land reform efforts promoted, for example under Law 160 mentioned above. When the bank was reformulated, its interest in providing the enabling financial services for land reform seems to have decreased. According to Grusczyński and Jaramillo, “the new bank does not lend to land reform beneficiaries because it requires a 130 percent collateral guarantee, and does not accept land as collateral. Land reform projects that provided guarantees through forward contracts or third-party guarantees (for example, local government guarantees) could be financed.”⁸⁴

In general, no evidence was found for state-level loan programs related to REDD+ projects.

7.2.3 Loan Guarantees, Pre-Paid Emission reduction purchase agreement Guarantees, and other payment for performance options

One option for local banks or the national government would be to provide loan guarantees to project developers for up-front development costs associated with REDD+ projects. Like existing mechanisms, a bank like Bancoldex could originate a loan and then seek a guarantee from another institution, perhaps one that is nationally-backed like those mentioned below. There are many pros and cons associated with public-versus-private guarantee schemes, so careful analysis will need to be done to determine the optimal approach. A useful reference that analyzes those pros and cons is an Organization for Economic Cooperation and Development (OECD) paper titled, “Facilitating Access to Finance, Discussion Paper on Credit Guarantee Schemes”⁸⁵. One of its primary conclusions is that while credit guarantee schemes may require financial support from the government initially, they should be designed to ultimately become financially sustainable, for example by relying only on financial fees charged for the guarantees to maintain future flows. Fees can’t be too high to discourage use but must be high enough to cover the costs of business.

Colombia has two nationally-backed institutions that provide loan guarantees. The National Guaranty Fund (*Fondo Nacional de Garantías-FNG*)⁸⁶ facilitates access to credit for micro, small and medium size companies by providing them with guarantees. They also back loans for public housing and tuition fees. The Agricultural Guaranty Fund (*Fondo Agropecuario de Garantías-FAG*) provides the same guarantee function that FNG does, but for agricultural and livestock loans. It is administered by the bank Finagro⁸⁷. In contrast to FNG, FAG guarantees small, medium and large producers with the largest producers paying the highest guarantee fees.

For both funds, a local bank originates the loan and then seeks the guarantee. Guarantee pricing depends on the type of loan. At FAG for example, up to 100 percent of the loan amount can be guaranteed, with annual fees ranging from 1.5 percent to 4.5 percent of the loan amount per annum.

An international loan guarantee product is being developed by the USAID Development Credit Authority (DCA). DCA is developing a carbon credit guarantee product that includes REDD+ and, if the new product is approved, would underwrite a portion of a lender’s risk related to non-delivery or under-delivery of emission reductions after validation. In this context the lender could be an entity or a pooled vehicle (e.g., a fund) that provides up-front funding to a REDD+ project through an emission reduction purchase

⁸⁴ “Land Reform - Land Settlement and Cooperatives - Special Edition.” 02512894th ser. (2003): 73-102. by Grusczyński, D. M., and C. P. Jaramillo. <http://www.fao.org/docrep/006/y5026e/y5026e07.htm> (see footnote 68)

⁸⁵ “Facilitating Access to Finance, Discussion Paper on Credit Guarantee Schemes” OECD. <http://www.oecd.org/investment/privatesectordevelopment/45324327.pdf>

⁸⁶ Fondo Nacional de Garantías S.P. website. <http://www.fng.gov.co/fng/portal/apps/php/index.get?getlanguage=RU4=>

⁸⁷ Finagro (Fondo para el Financiamiento del Sector Agropecuario) website. http://www.finagro.com.co/html/i_portals/index.php?p_origin=internal&p_name=content&p_id=M1-131&p_options=

agreement (or off-take) type transaction or in a traditional loan structure. The DCA product is still under development, but once finalized, it could provide REDD+ projects with a valuable risk reduction tool to catalyze investment. Loan guarantees are one example of the type of structures proposed for deployment in the private markets related to carbon finance for primary activities, i.e., those that support early investments in REDD+ projects by an advisory team working on the private finance component.⁸⁸

While different from pure market-based systems, another option for the government to consider is ways to stimulate payment-for-performance for REDD+ activities as a way to reduce deforestation while the market is developing. This structure can include outright payment-for-performance (that doesn't rely on a transfer of a carbon credit or other right), or could be structured to provide a floor price for carbon credits to reduce the developer's risk. This would encourage the early development of REDD+ projects.

7.2.4 Municipal/Department Bond issuance

A municipal bond issuance is a financing structure that has been used successfully for financing infrastructure and some renewable energy projects in Mexico. These bond structures use future revenue streams (taxes or fees) to support the issuance of a bond by the municipality or the department. Depending on the type of revenue stream used to pay back the bond's interest and principal, these bonds may even be credit agency rated. For REDD+, it is feasible for a municipality (or department) to issue bonds that are supported by environmental fees or royalties (*Regalias*). This assumes that the department governments want to use future taxes or environmental fees and royalties to fund REDD+ development today. The taxes or fees could be used to help fund the implementation of REDD+ projects and programs supported by the department governments.

Generally, these bonds are purchased by domestic or regional institutional investors and one added value with a REDD+ municipal bond structure is the possibility of including future carbon revenue as an upside for bond buyers. And while the carbon revenue stream is too uncertain to underwrite repayment alone, when combined with the revenue stream from environmental fees, it could provide an attractive structure for Colombian institutional investors and thus promote private investment capital for REDD+. By issuing bonds across municipalities or departments, it could lower the financing-related transaction costs that REDD+ projects often face, as their deal sizes are too small to attract large institutional investors and this structure serves as a mechanism for aggregating credits from different projects.

7.2.5 Domestic Institutional Investors

A public-private partnership with participants from Colombia's domestic institutional investment community, for example Corficolombiana⁸⁹ (the oldest financial institution in Colombia providing money management and advisory services), could jointly invest in tiered risk-sharing structures with private capital taking the less risky positions in the "waterfall" of payment priorities. In this way, projects that are (or are perceived to be) high risk may be able to attract capital. In meetings, Corficolombiana indicated they promote sustainable investing with a focus on sustainable crops, water and climate change. While they do not have a formal policy for sustainable investing, they believe they will in the near future. Corficolombiana belongs to Grupo Aval, one of the largest economic organizations in Colombia, which has investments in diverse sectors of the economy.

⁸⁸ Reference CMIA network document, "Recommendations from Glen House to the UN Green Climate Fund's Private Sector Facility (GCF-PSF) from a broad coalition of Finance Sector (Banking, Investments, and Insurance) representatives" 5 May 2012

⁸⁹ Corficolombiana website. www.corficolombiana.com.co/

7.2.6 Other Risk Mitigation instruments that Could Promote Investment

The government provides crop insurance subsidies. In 2010, \$10 million was budgeted and \$4.2 million was effectively used⁹⁰. One report indicated that only 1 percent of Colombian farmland is insured⁹¹. Forestry insurance is one of the products offered, but there is still potential to develop this offering further. Some departments have worked on developing state-specific insurance products.

Political risk insurance is a mechanism to reduce REDD+ project developers' and investors' risk related to political change in a REDD+ project host country related to, for example, political violence or expropriation. The national government should consider promoting the availability of this type of insurance in addition to crop insurance to provide investors with additional risk mitigation tools for REDD+ projects. Political risk insurance can cover a number of risks including two broad categories: expropriation and political violence. Expropriation covers acts that a host country government makes to deprive the project or investor of their fundamental rights. For the US-based Overseas Private Investment Corporation, traditional expropriation coverage protects against nationalization, confiscation and creeping [or indirect] expropriations⁹², which result in a loss of the total investment. But they also include government interference in other forms, including:

- abrogation, repudiation, and/or impairment of contract, including forced renegotiation of contract terms;
- imposing of confiscatory taxes;
- confiscation of funds and/or tangible assets; and
- outright nationalization of a project.

Expropriation insurance can also include denial of justice coverage and protects the insured from non-payment of an arbitral award by a host country government.

A more advanced risk mitigation instrument called mono-line insurance might be developed at a more advanced stage of market development. Mono-line insurance is a well-known insurance product which is offered in conjunction with a bond issuance. It is called mono-line because the companies that offer it concentrate on only one type of insurance product, in this case bond insurance. REDD+ projects could be aggregated and structured into a series of bonds with different levels of risk. The most risky portion of the structure could then be combined with mono-line or bond insurance to reduce risk to the investor.

⁹⁰ "Agricultural Insurance in Latin America: Developing the Market." Publication no. 61963-LAC. Washington DC: World Bank, 2010. http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/Agricultural_insurance_in_LAC_web_FINAL.pdf (p. 103)

⁹¹ "Less than 1% of Colombia's Farmland Insured." by Ben Hockman. Colombia Reports, March 11, 2011. <http://colombiareports.com/colombia-news/economy/14849-less-than-1-of-colombias-farmland-insured.html>

⁹² Indirect expropriation has been defined as an act by a State that is detrimental to a foreign private investment, even if the investor retains property rights over the investment. See, "Best Practices - Indirect Expropriation" by Suzy H. Nikiema, International Institute for International Development, March 2012.

7.3 DOMESTIC ENVIRONMENTAL FEES AS POTENTIAL FUNDING SOURCES FOR REDD+

There are two large, national environmental fee systems in place that could potentially be used to support REDD+ projects – *Regalias* and the new Biodiversity Mitigation system. In addition there are national payments for ecosystem services regulations along with local payment for ecosystem services projects.

7.3.1 Royalty (or *Regalias*) System

The Royalty (or *Regalias*) system is a kind of national royalty fund which redistributes proceeds from taxes on non-renewable resources. The industries subject to the tax include hydrocarbons (oil and gas), coal, nickel, iron, copper, precious stones, precious metals, salt, limestone, gypsum, clay and a transportation tax (for example for pipelines crossing lands). Each type of resource has a formula(s) associated with it for computing the tax amount (typically based on the amount of production/extraction) as well as for computing how the funds will be distributed. Typically the funds are split amongst the relevant department, municipality and/or shipping port, with part going to the national fund and then used to promote mining, environment and regional investment projects defined as priorities in development plans, particularly in non-producing departments. There is currently an effort to more equitably distribute the *Regalias* funds.

The 1991 Constitution envisions a central role for individual citizens and NGOs in formulating and implementing environmental policy. In addition to having collective rights to a clean environment, citizens have the duty to protect natural resources and the environment and the *Regalias* system is meant to support these efforts.⁹³ Law 1530⁹⁴ has the following goals: stabilize regional investment, distribute royalties broadly, be a driver of regional development and competitiveness and use royalties with efficiency and care. In total there are projected to be \$4.7 billion in *Regalias* funds in 2012.

The intention for *Regalias* is to target investment projects in infrastructure, mining, and ecological preservation. But the distribution of funds became concentrated in certain areas and only nine states received the majority of *Regalias* funds. Information on *Regalias* figures by department in 2012 is on the General Royalties System portal⁹⁵. The 2012 estimated top 15 department recipients are listed below. Together, the top 15 account for 75 percent of the *Regalias*.

⁹³ “Republic of Colombia Mitigating Environmental Degradation to Foster Growth and Reduce Inequality,” by Sánchez-Triana, Ernesto, and Kulsum Ahmed. Publication no. 36345 - CO. Washington, D.C.: World Bank, 2006.

⁹⁴ <http://www.alcaldiabogota.gov.co/sisjur/normas/Norma1.jsp?i=47474>

⁹⁵ “Distribución recursos del SGR vigencia 2012”, Sistema General de Regalias website.
<http://sgr.dnp.gov.co/Distribuci%C3%B3n/Distribuci%C3%B3nrecursosdelSGRvigencia2012.aspx>

Table 6: *Regalias* Receipts 2012T

Top 15 Departamento Regalia Recipients 2012

Departamento	TOTAL SGR (COP)	TOTAL SGR (USD)
Meta	1,212,599,779,048	664,256,247
La Guajira	615,739,175,329	337,298,918
Casanare	573,006,244,402	313,890,027
Cesar	500,812,312,221	274,342,543
Córdoba	466,731,533,394	255,673,259
Antioquia	452,310,637,894	247,773,562
Bolívar	347,678,705,590	190,456,700
Santander	322,292,726,726	176,550,384
Sucre	316,281,966,965	173,257,720
Boyacá	312,400,618,095	171,131,536
Nariño	309,153,334,155	169,352,689
Huila	271,477,340,718	148,713,964
Magdalena	258,820,846,671	141,780,798
Cauca	250,165,891,914	137,039,656
Tolima	226,334,683,443	123,985,036
Subtotal	6,435,805,796,563	3,525,503,038

Total SGR 8,587,180,264,410 4,704,015,483
 (at 1825.5 pesos/\$)

Source: Sistema General de Regalias (SGR) portal

7.3.2 New Mitigation of Biodiversity Loss System

There are new rules that determine the type of biodiversity mitigation required before an environmental license is granted by ANLA. Environmental licenses are required to engage in the following; mining, infrastructure, electric energy, mines and ports, energy generation construction, operation of international airports including new runways, public works, projects in the national rivers network, public and private railway construction and maritime construction. This new system complements the *Regalias* system, which calculates the amounts owed by the extraction of non-renewable resources based on the amount of extraction. The new system, requires an assessment of the type of land being used and potential compensation related to that use while projects are being planned. One way to differentiate the two systems and understand how they could interact is to consider one an initial investment (biodiversity mitigation system) versus the ongoing investment (the *Regalias*).

A manual published in August 2012⁹⁶, “Manual for the Allocation of Compensation for Loss of Biodiversity”, authored by the Department of Forests, Biodiversity and Ecosystem Services at MADS, outlines the mechanics for determining required actions under the new Biodiversity Mitigation system. Compensation factors are defined by type of area (natural ecosystems, secondary vegetation and its associated wildlife) impacted. For example, secondary vegetation disturbance would require preserving land 2 to 4 times in size. Natural ecosystems would require preserving 4 to 10 times as much land.

MADS created the system in conjunction with the international non-profit organizations World Wildlife Fund (WWF), Conservation International (CI) and The Nature Conservancy (TNC), with the effort led by TNC.

⁹⁶ Ministry of the Environment and Sustainable Development (MADS) website. “Manual de Compensaciones por pérdida de biodiversidad” http://www.minambiente.gov.co/documentos/normativa/020812_manual_compensacion_biodiversidad.pdf

Once the amount of land required to mitigate the activity is determined (using the various factors outlined in the rules) the developer chooses the land type with approval from MADS. The land chosen should come from a list of Priority Areas for Conservation generated by MADS and the local environmental and national parks authorities, though this does not have to be the case and guidelines and tools for choosing appropriate land have been or will be provided by MADS.

Based on interviews with MADS staff who will likely be responsible in whole or part for enforcing this new system, the implementation phase is just beginning with internal training and staffing efforts that took place in September 2012. This mitigation system will rely on the rules set forth for ‘valuing’ the disturbed land and the experience and skills of the staff to administer the program.

While the specifics of how the new system will be implemented were still being determined in September 2012, based on a reading of the manual, it appears theoretically feasible to develop REDD+ projects on land earmarked as ‘ecologically equivalent’. That is, even after efforts at prevention, mitigation and correction of the impacts to biodiversity, some projects may still need for the project developer to fund ‘ecologically equivalent’ areas. Some of the criteria used for determining whether an area is suitable as ‘ecologically equivalent’ are: i) same kind of ecosystem affected; ii) equivalent or greater size, condition, species richness; and iii) located in the same area, preferably the same hydrologic subzone, municipality, etc.

According to MADS, there will be software available to help determine which areas are ‘equivalent and effective’⁹⁷. Directing the funding and/or activities under this new program to reduce drivers of deforestation could be part of the national REDD+ strategy. And depending on the assessment of any additionality-related issues, they may be eligible for generating emission reductions.

7.3.3 Payments for Ecosystem Services

The national payment-for-ecosystem-services regulations along with local payment-for-ecosystem-services projects could potentially be combined with REDD+ projects to provide domestic funding sources.

Nationally, Law 1151 of 2007, “National Development Plan 2006-2010,” gives MADS the responsibility to development payment for ecosystem services incentives. It permits the investment of 1 percent of municipal and department revenue to be invested in such schemes. At the local level, payment for ecosystem services programs exist related to water use, which is effectively taxed to provide funding for environmental preservation/mitigation in a number of areas, including: CIPAV in the coffee growing region (*cafetera*), PROCUENCA in Manizales, the Instituto Humboldt in the department of Boyaca and EcoVersa in the Guavio region.⁹⁸

7.4 FINANCIAL AND ACCOUNTING REGULATIONS SUPPORT CARBON MARKETS AND PRIVATE INVESTMENTS

7.4.1 Domestic Exchanges for Carbon Transactions

There are two potential exchanges – Derivex and the Mercantile Exchange of Colombia (*Bolsa Mercantile de Colombia*-BMC). Derivex, founded in 2010, is the derivatives negotiation system (functioning as an exchange) for energy products. It offers monthly electricity futures as hedging and investment products. It is also highly

⁹⁷ “August 2, 2012: Manual de Compensaciones,” quote from Xiomara Sanclemente, Director of Forests, Biodiversity and Ecosystem Services of MADS. <http://www.minambiente.gov.co/contenido/contenido.aspx?conID=8362&catID=1332>

⁹⁸ “Deforestacion Evitada Una Guia REDD+ Colombia,” by Ortega, S. C., A. García-Guerrero, C-A Ruiz, J. Sabogal, and JD Vargas, 2010.

interested in offering carbon instruments as well as gas and coal products⁹⁹. Derivex is a private exchange or dealing system that is 50 percent owned by the Stock Exchange (*Bolsa de Valores de Colombia-BVC*). Since 2010, Derivex has had a dealing system in place for trading energy commodities as “over the counter” (OTC) transactions. As part of their strategic plan, Derivex would like to develop the ability to trade carbon related products. They see the carbon market as important, but not financially viable from a break-even perspective in the next fifteen years, though a Derivex official has been quoted as saying they will be trading credits for GHG emissions by 2013¹⁰⁰. They want to be positioned as the platform of choice for hedging and investment products in electricity, gas, coal, bio-combustibles and CO₂ emission certificates. Currently they are operating in electricity trading with monthly electricity futures and mini monthly electricity futures contracts. They operate using NASDAQ OMX’s Negotiation System X-stream infrastructure provided by the BVC¹⁰¹. For OTC transactions, trades may be registered with the BVC.

A potential competitor to Derivex is the BMC. BMC was founded in 1979 and was formerly Colombia’s National Agricultural Exchange. It now trades commodities, as well as financial instruments like bonds, securities and other contracts to provide producers and agribusiness with financial instruments for their activities. BMC is the only institution authorized to trade non-energy commodities. It is also the only institution in Colombia currently authorized by the SFC to trade carbon instruments, a market it is highly interested in developing¹⁰².

BMC is one of the partners in the GEF Voluntary Mitigation Project¹⁰³ which was approved in 2011, and includes a feasibility study and “eventual” design of a national climate exchange. Overall, the platform-related project objective is, “To formulate and establish the technological and institutional platform basis for verified emission reductions (VERs) market mechanism and to facilitate efforts of voluntary mitigation of greenhouse gas (GHG) emissions in Colombia, by: (i) creating a market platform for nationally issued VERs accessible to national or international buyers; (ii) supporting the issuing of VERs from forest carbon projects¹⁰⁴ developed in Colombia; and (iii) fostering local demand of VERs through corporate carbon mitigation and offsetting strategies.”¹⁰⁵

There appears to be some level of competition between BMC and Derivex as BMC asked the SFC in March 2012 not to allow Derivex to market its carbon capabilities until it has an actual product to offer.¹⁰⁶ On the other hand, the BMC offering would ostensibly be for the voluntary market only.

⁹⁹ “Colombia Market Profile and Foreign Investor’s Guide,” Colombia Securities Exchange.
http://www.bvc.com.co/pps/tibco/portalbvc/Home/Inversionistas/Como_Invertir_en_Colombia?action=dummy

¹⁰⁰ “Derivex to Trade Colombian Coal, Gas Futures as Price Swings Boost Demand.” Bloomberg. October 14, 2010.
<http://www.bloomberg.com/news/2010-10-14/derivex-to-trade-colombian-coal-gas-futures-as-price-swings-boost-demand.html>

¹⁰¹ “Colombia Market Profile and Foreign Investor’s Guide,” Colombia Securities Exchange.
http://www.bvc.com.co/pps/tibco/portalbvc/Home/Inversionistas/Como_Invertir_en_Colombia?action=dummy

¹⁰² Colombia Stock Exchange website. <http://www.bna.com.co/>

¹⁰³ “Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia.” Global Environment Facility, 2011.
http://www.thegef.org/gef/news/IYF_Voluntary_Mitigation_GHG_Colombia

¹⁰⁴ For the purposes of this project, Forest Carbon Projects include: Afforestation, reforestation and land use projects; agro-forestry and silvopastoral projects; Reduced Emissions from Deforestation and Degradation (REDD+) projects; and efficient cook stoves projects.

¹⁰⁵ “Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia.” Global Environment Facility, 2011.
http://www.thegef.org/gef/news/IYF_Voluntary_Mitigation_GHG_Colombia

¹⁰⁶ According to a Derivex official met with during field research.

7.4.2 Regulation

The regulatory environment in Colombia for carbon instruments is not firmly established, but a healthy level of debate on future organization that could support trading carbon has been occurring for the last few years. At the heart of the discussion is whether carbon instruments should be treated as securities (which can be registered and have derivatives trade on them) or commodities which could also have derivatives trade on them. Derivex argues the former because they are registered to trade derivatives on securities. BMC argues the latter because they are authorized to trade commodities.

The SFC is the regulator responsible for overseeing the trading of derivatives. The SFC is a technical agency attached to the Ministry of Finance, with legal, administrative and financial autonomy and its own assets¹⁰⁷. Under Law 964 of 2005, Article 2, derivatives are allowed to be registered and then function as securities. This registration concept also currently applies to the electricity derivatives traded on Derivex. It does not apply to commodities

Specifically, Paragraphs 3 and 4 (unofficially translated) state:

Paragraph 3. The provisions of this Act and the rules that build on and compliment it are applicable to financial derivatives such as futures contracts, options and swap contracts, provided that they are standardized and that they can be traded on stock exchanges or other trading systems. The products referred to in this paragraph may only be offered to the public by their registration in the National Registry of Securities and Issuers¹⁰⁸.

Paragraph 4. The Government may recognize the use of financial derivatives contracts whose underlying assets are electricity or fuel gas¹⁰⁹ after informing the Commission of Regulation of Energy and Gas. The Commission will take into account such recognition while enforcing the statutory objectives under Laws 142 and 143 of 1994, and those that modify, add or replace them.

Carbon related derivatives could, in theory, be treated the same as electricity derivatives, though this has not been allowed by Colombian regulators. In the US, the relevant regulator – the Commodities Futures Trading Commission – recently ruled that environmental commodities such as carbon offsets, emission allowances and renewable energy certificates will not be subject to new, stringent derivatives regulations and will not be classified as swaps, but as physically settled securities.¹¹⁰

In general, Colombia seems committed to financial reforms that bring derivatives regulation in line with international standards. For example, in 2009, in Article 74 of Law 1328 the rules for Colombians entering into OTC derivatives with foreign parties were changed so that when the Colombian counterparty enters into a bankruptcy or insolvency event, the foreign counterparty can exercise early termination rights, collect payments and enforce collateral.¹¹¹

¹⁰⁷ "Legal Entity Information." Investor Relations Colombia. Government of Colombia, August 26, 2010. <http://www.irc.gov.co/irc/en/legalinformation/Legal%20information%20-%20entities.pdf>

¹⁰⁸ Emphasis added

¹⁰⁹ Emphasis added

¹¹⁰ "US Energy Firms Cheer CFTC Decisions on 'swap' Definition, End-user Exception." Risk.net. July 11, 2012. <http://www.risk.net/energy-risk/news/2190646/us-energy-firms-cheer-cftc-decisions-on-swap-definition-enduser-exception>

¹¹¹ "Colombia." IFLR 100 - Guide to the World's Leading Financial Lawfirms. IFLR, 2011. <http://www.iflr1000.com/pdfs/Directories/24/Colombia.pdf>

In the absence of specific regulatory rules or laws related to REDD+ finance, the SFC has no opinion related to it or to any derivatives associated with carbon finance. In a letter written in August 2012, the SFC outlined its position by explaining its primary functions, which don't include carbon finance, and by referring the correspondent to MADS for specific information on REDD+. At this time, the regulators are not involved in carbon markets, at least publicly.

However, with regard to BMC's preference to trade VERs as physical commodities, the SFC has already authorized the trading of physical commodities, including 'climate commodities'. Under Article 50 of Decree 1511 of 2006, "Agricultural Commodities Exchanges," the BMC is cited as the only exchange authorized to trade these instruments due to their pre-authorized regulatory framework.¹¹² Thus if forest and agricultural carbon was treated as an "agricultural commodity," then by extension this Article authorizes BMC solely to trade forest and agricultural carbon.

The conclusion of an analysis commissioned as part of the GEF Voluntary Mitigation Project is that VERs are commodities and that 'a specific market has already been developed which is a transparent transaction platform, legally validated', i.e., the BMC¹¹³.

So while Derivex argues for derivatives (trading as securities), BMC has the SFC and a GEF project conclusion on its side, arguing that VERs should be treated and traded as physical commodities. In the end, it may be possible to argue that both are possible as different markets might choose different ways to trade for different reasons. This would provide private investors with more choices but could be cumbersome from a regulatory perspective.

7.4.3 Domestic Voluntary Market

There is no national regulation requiring the government and/or companies in Colombia to limit GHG emissions. Nor have companies undertaken projects on a large scale to measure their carbon footprints and offset emissions voluntarily. There is, perhaps, a growing local recognition that carbon offset standards related to forests are an important sector. An example of a maturing local expertise in carbon credit markets is recent work by the Colombian Institute of Technical Standards and Certification (*Instituto Colombiano de Normas Técnicas y Certificación*- ICONTEC) – a non-profit, private national authority on standards dedicated to the creation of new standards and the oversight of existing ones. ICONTEC recently released a draft GHG forestry protocol for comment. The standard relates to offsetting emissions via the purchase of forest carbon offsets.¹¹⁴ ICONTEC is also the first Latin American organization certified under the CDM as a Designated Operational Entity able to validate and verify CDM projects. The fact that ICONTEC is preparing for increased demand for forestry offsets in Colombia could be seen as positive for the growth of domestic offset demand.

On September 27, 2012, VCS and Fundación Natura announced they had signed a Memorandum of Understanding to "work together to build the necessary foundation for a robust voluntary carbon market in Colombia [which] will recognize VCUs as one of the main [carbon] credits to be transacted."¹¹⁵ This

¹¹² "Developing a market platform for trading units and Verified Emission Reduction Component design GEF project I 4135," Consultation No. I, by Mauricio Mira Ponton. November 17, 2010.

¹¹³ "Developing a market platform for trading units and Verified Emission Reduction Component design GEF project I 4135," Consultation No. I, by Mauricio Mira Ponton. November 17, 2010.

¹¹⁴ "ICONTEC - Certificación De Programas De Compensación Forestal De GEI." <http://www.icontec.org.co/index.php?section=154>

¹¹⁵ "VCS Announces Historic Agreement to Build Voluntary Carbon Market in Colombia." <http://v-c-s.org/news-events/news/vcs-announces-historic-agreement-build-voluntary-carbon-market-colombia>

agreement should help leverage the funds Fundación Natura is managing as part of the GEF project for carbon market development in Colombia.

Under the GEF Voluntary Mitigation Project, a “reliable and lasting market mechanism for promoting and facilitating voluntary GHG emission mitigation and offsetting” is to be created¹¹⁶. Part of the effort is the creation of an exchange-type trading platform, like the ones being pursued by BMC and Derivex, described above. During interviews with government officials, it was made clear that there is discomfort at how this effort to create an ‘exchange’ is being called the ‘carbon market’, when in fact none has been sanctioned by the government.

BMC has committed to being the coordinating entity within the GEF project for the creation of a market platform for the VER market. As such, they will receive approximately \$300,000 in donations from the project for purposes of: undertaking studies around the creation and best practices for a platform (including technical, fiscal, legal and negotiation plans); doing workshops on socialization; education regarding the project; and design and implementation. The remainder of the budget is in-kind contributions from BMC for personnel, equipment, etc.

The desired outcomes of the project, i.e., BMC’s deliverables, include an information system with tools related to the carbon market with an emphasis on carbon forestry and about instances of mitigating and reducing effects of GHG emissions. Deliverables also include a registry interface connected with a known international registry that guarantees the transparency and tradability of the VERs and a transaction mechanism that leverages the technological resources of the BMC.

The GEF projects’ voluntary market development component is made up of three segments including demand, supply and the trading platform. Each segment has an executing agency and for demand, it is the Bogota Chamber of Commerce. They will lead workshops to provide technical and managerial capacity-building for the private sector as it builds climate change strategies, develop guidelines for measuring carbon footprints, launch a public GHG accounting registry, compile case studies of entities that have successfully developed mitigation strategies, etc. Amongst other project goals, the Bogota Chamber of Commerce is supposed to develop strategic partnerships with at least two financial institutions (including Bancoldex) to facilitate financing GHG mitigation.

7.4.4 California Example and Regional Trading Platform

In supporting the development of a domestic carbon market trading platform, the Colombian government could consider the model used by the California Air Resource Board’s where they issued a Request for Proposal (RFP) for the key market and registries functions needed to support their carbon cap-and-trade program. The national government could specify the requirements of a national trading system that would allow national and international investors the ability to trade carbon related instruments. In the case of California, the RFP was broken into four pieces including an auction services provider, a financial services provider (for facilitation of the purchase and sale of emission allowances), an independent market monitor and a market monitor trainer. The best parallel to Derivex and BMC’s efforts under the GEF project could be the financial services provider RFP¹¹⁷. The services include payment and settlement, collateral assessment and administration.

¹¹⁶ “Mechanism for Voluntary Mitigation of Greenhouse Gas Emissions in Colombia.” Global Environment Facility, 2011. http://www.thegef.org/gef/news/IYF_Voluntary_Mitigation_GHG_Colombia

¹¹⁷ Request for Proposal (RFP) No. 10-109, entitled, “Cap- And-Trade Financial Services for Auction and Reserve Sale. RFP.” Sacramento, CA: Air Resources Board, 2011. http://www.arb.ca.gov/cc/capandtrade/contracts/financial_services_rfp.pdf

Emerging compliance systems in states and provinces, like California, could provide an opportunity for departments in Colombia to participate on a state-to-state basis. The California cap and trade program will be operational in January 2013, and includes a provision to allow for sectoral crediting for REDD+. However, the inclusion of REDD+ is still subject to rule making and ARB board approval which is not certain and not expected until sometime in 2015. If it does occur, this has the potential to create a new market for REDD+ offsets. The opportunity exists for states in Colombia to increase their visibility and participation in the development of the California's market through the Governors Climate and Forest Initiative. While not officially part of the ARB REDD+ rule making process, the Climate and Forest Initiative has been supporting states and provinces in their preparation for jurisdictional REDD+, within systems like California's AB 32.

To be considered a leading player, Colombia must remain engaged at both the national and state levels in its advocacy for inclusion of Colombian forest carbon credits as an attractive option for investors. There are also indications of regional potential for a trading mechanism in the MOUs (memorandums of understanding) between the BVC and Canada¹¹⁸, Brazil and Mexico. In addition, Peruvian and Chilean stocks began to be available to Colombian investors domestically on May 20, 2012, when the Integrated Latin American Market was launched¹¹⁹. Given the BVC's infrastructure flexibility, Derivex believes product extension from stocks and bonds to include carbon instruments would be relatively easy to achieve with these regional and international markets.

7.4.5 Over-the-Counter Carbon Transactions

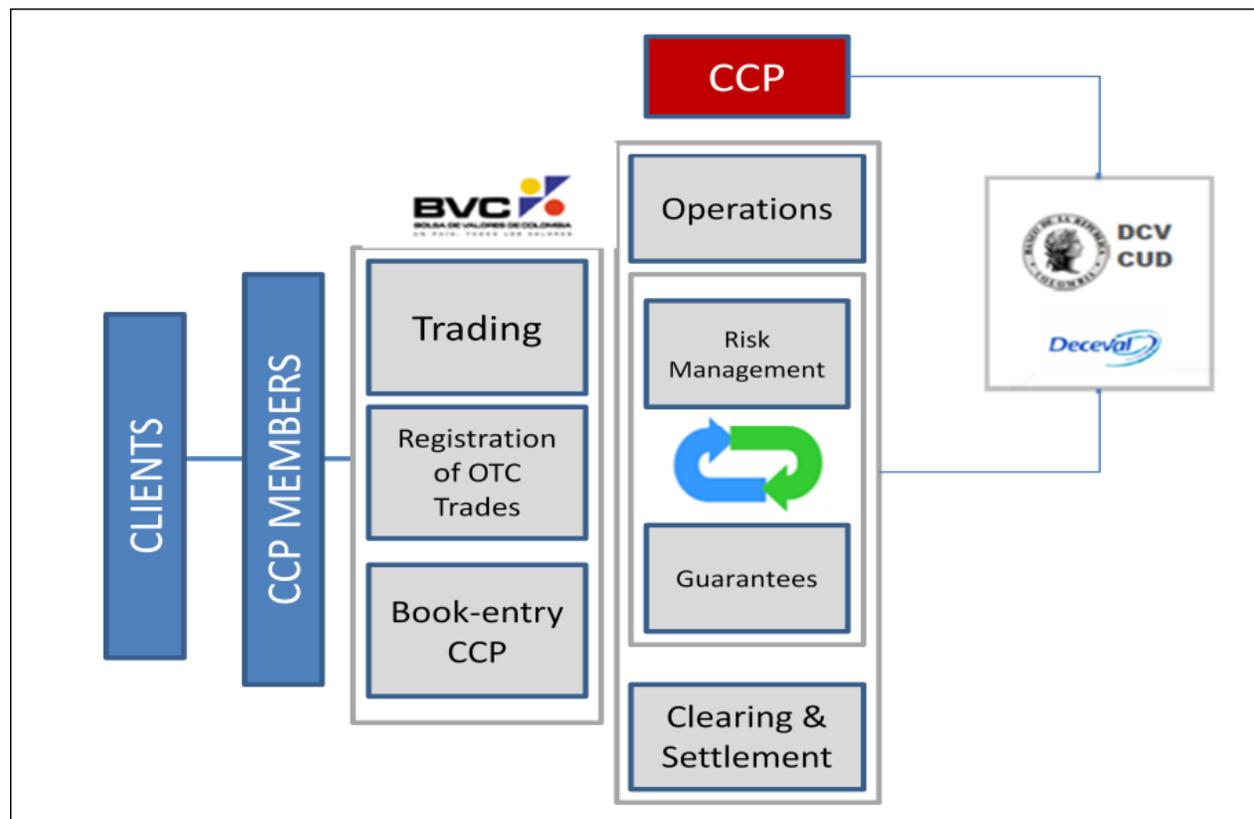
OTC derivatives transactions are allowed as long as they are registered with the BVC via the Central Counterparty Clearinghouse (*La Cámara de Riesgo Central de Contraparte de Colombia-CCP*). BVC must accept derivatives market participants. Then, they directly access the system for execution or registration of trades, whether conducted for their own account or on the behalf of others, including for portfolios or funds they manage. See the below for a schematic representation of how derivatives trades settle. An overview of CCP's functions, in English, can be found on the CCP's website¹²⁰. Derivex is a CCP member and its energy derivatives products settle through the CCP.

¹¹⁸ "Bolsa De Valores De Colombia, Toronto Stock Exchange and TSX Venture Exchange Sign Memorandum of Understanding to Formalize and Promote Cooperation between Their Markets." TMX20group. June 7, 2012. http://www.tmx.com/en/news_events/news/news_releases/2012/6-7-2012_TMXGroup-BVC-memorandum.html

¹¹⁹ "Stock Market Named the Best in the World." Worldfolio. July 1, 2011. <http://www.worldfolio.co.uk/region/south-america/colombia/colombian-stock-exchange>

¹²⁰ "Colombian Central Counterparty CRCC S.A.," by Oscar Leiva Villamizar, November 2011. http://www.camaraderiesgo.com/index.php?option=com_content&view=article&id=14&Itemid=10

Figure 4. Derivatives settlement in Colombia (source: Colombian Securities Exchange (BVC or Bolsa de Valores de Colombia)¹²¹)



7.4.6 Equity Investments in Local Entities

Colombia also has a robust private equity sector which could be targeted for investment in individual or pooled REDD+ project carbon credits, possibly as project partners contributing toward the up-front development costs¹²². Most private equity funds target investment towards infrastructure, power and energy, real estate and general services¹²³.

Current government policy is to promote the private equity industry in Colombia. For example, Bancoldex has its ‘Capital Program’ created in 2009 to grant financial and non-financial support to funds oriented to invest in small and medium-sized companies. In addition, there are other government sponsored funds which have been recently created as investment vehicles in order to allow state-owned companies to invest in social interest programs, according to a leading law firm in Bogota, Gomez-Pinzon Zuleta¹²⁴.

¹²¹ “Colombia Market Profile and Foreign Investor’s Guide,” Colombia Securities Exchange. http://www.bvc.com.co/pps/tibco/portalbvc/Home/Inversionistas/Como_Invertir_en_Colombia?action=dummy

¹²² “Opportunities for Investment – Private Equity Funds” Colombian investment promotion website. <http://www.proexport.com.co/en/FTA-USA-Colombia/opportunities-investment>

¹²³ “Private Equity – Colombia” by Daniel Londono and Natalia Garcia Arenas. <http://www.latinlawyer.com/reference/topics/50/jurisdictions/8/colombia/>

¹²⁴ “Private Equity – Colombia” by Daniel Londono and Natalia Garcia Arenas. <http://www.latinlawyer.com/reference/topics/50/jurisdictions/8/colombia/>

The Ministry of Trade, Industry, and Tourism formulates foreign investment policy in coordination with the Ministry of Finance and Public Credit, taking into account CONPES guidelines. The primary regulations governing foreign investment in Colombia are Law 9 of 1991, Decree 2080 of 2000, CONPES Resolutions 51, 52, and 53, and Resolution 21 of the Board of Directors of the Central Bank. In general, markets in Colombia have been liberalizing since the early 1990s. Foreign investment screening has been eliminated and registration procedures are relatively simple and governed by Decree 1844 of 2003.¹²⁵

7.5 SOURCES OF FUNDS, FINANCIAL AND ACCOUNTING REGULATION AND MARKET MECHANISMS: GAPS, OPPORTUNITIES AND CONSTRAINTS

Top priority issues for Funding Sources:	
Gaps/Opportunities	Constraints/Dependencies
<p>Secure funding needed to support REDD+ readiness and implementation and maintain the REDD+ program</p> <p><i>Priority: High</i></p>	<p>Financial resources, financial technical support</p> <p>It is unclear what the total estimated costs are for funding the setup of the REDD+ program in Colombia because they have not completed a full implementation, budget and funding plan (see Section 3.1). Based on the information provided it is clear that there is insufficient funding for the activities needed to build Colombia's REDD+ program. Without a comprehensive budget and funding for finalizing the build-out and administration of the REDD+ program and with the reliance on primarily donor funding, the government does not have complete control over implementation and cannot build a stable and permanent staff to administer the REDD+ program on an on-going basis.</p>

¹²⁵ "2012 Investment Climate Statement – Colombia" <http://www.state.gov/e/eb/rls/othr/ics/2012/191129.htm>

<p>Advocate internationally for market-based and payment-for-performance-based approaches and a wide acceptance of Colombian carbon credits</p> <p><i>Priority: High</i></p>	<p>Government resources</p> <p>Colombia has been an important country in the region and internationally when it comes to promoting pragmatic and market-based approaches to REDD+. This role should continue under the UNFCCC and with other key developed country governments to promote REDD+ as an allowable offsets type and to forge agreements that allow Colombian carbon credits into these compliance systems. Complementary to this, Colombia should encourage and support the development of compliance-grade REDD+ projects and programs (department and regional) to help ensure there is consistent supply of credits once the demand increases.</p>
<p>Use future taxes or environmental fees and royalties to finance projects today, e.g. through municipal bond issuance</p> <p><i>Priority: High</i></p>	<p>Political will, carbon markets and financial technical expertise</p> <p>A municipal finance market using environmental fees or royalties (<i>Regalias</i>) should be developed to use future taxes or environmental fees and royalties to fund REDD+ development today. The issuance of municipal bonds would fund a portfolio of REDD+ activities that could be added together to create a large enough deal size and have an upside REDD+ carbon return “kicker” to attract domestic institutional investors.</p>
<p>Foster the creation of domestic demand through voluntary and possibly compliance markets</p> <p><i>Priority: Medium</i></p>	<p>Political will, carbon markets technical expertise, and domestic corporate commitment</p> <p>Fostering the creation of domestic demand for REDD+ carbon credits via voluntary and possibly compliance markets will ensure engagement at all levels of economic activity and create awareness and acceptance of the public for carbon markets. As Colombia’s economy has a number of large to medium companies with sizeable GHG emissions, the promotion of a strong voluntary program (focused on REDD+) could create meaningful demand in the country.</p>
<p>Domestic banks should develop credit lines that support up-front financing for projects</p>	<p>Resources, carbon market and financial technical expertise</p> <p>To date, the majority of up-front investment in REDD+ projects has depended on international donor finance.</p>

<p><i>Priority: Medium</i></p>	<p>However, as the market for carbon develops and projects can secure long-term carbon purchase agreements, domestic banks like Bancoldex should take the lead in developing innovative credit lines that incorporate some aspect of up-front financing for REDD+ projects to allow projects to reach their payback stage. A project would need to meet certain milestones for finance to be available, similar to a construction loan.</p>
<p>Promote insurance products related to REDD+</p> <p><i>Priority: Medium</i></p>	<p>Carbon markets and finance technical expertise</p> <p>Promoting third party insurance products related to REDD+ will give investors another option to support their entry into the market. Colombia should investigate what can be offered to lower domestic REDD+ investment risk.</p>
<p>Develop trading platforms for commodity and derivatives carbon products</p> <p><i>Priority: Medium</i></p>	<p>Political will, development of tradable REDD+ offsets</p> <p>A trading platform for REDD+ credits once they are created is under development in Colombia with both the BMC and Derivex working on physical commodity and derivative trading platforms, respectively. This work should be supported by a responsive regulatory entity that is interested in working with financial regulators, DNP, international donors and private sector lenders and investors to create primary and secondary markets for Colombian forest carbon credits.</p>

8.0 SUMMARY AND CONCLUSIONS

Colombia has made significant progress in designing and implementing its REDD+ program. The government of Colombia has a relatively high level of capacity for REDD+, including the technical aspects managed within IDEAM. There is a committed core of participants at the national and local levels, supported by a constellation of international experts from industry and the non-profit world working toward the development of REDD+ activities.

While Colombia is moving toward the implementation of its REDD+ program, there are still a number of key elements that could be developed further or may need either additional support to promote market-based and payment-for-performance mechanisms. The highest priority areas identified in this report were:

- Clarify the authority for CARs/departments to develop REDD+ programs and how national and sub-national efforts will interact
- Develop short-term procedures to allow REDD+ project proponents to secure carbon tenure then develop required laws/decrees that clarify carbon tenure based on land and natural resource tenure.
- Develop a comprehensive budget and funding plan for implementation and operations of the REDD+ program
- Develop national REDD+ activity registration platform
- Create policies and procedures for offset issuance
- Adopt a set of standards and make them publically available for how REL will be set and MRV will be conducted
- Make a determination of if/how departments may move forward with developing their own REL and MRV
- Indicate if/how projects will be grandfathered within future sub-national and national carbon accounting standards (this could be part of adopting standards)
- Continue to engage communities and build capacity such that the REDD+ program design reflects stakeholders consensus/ input
- Develop/adopt a set of SESA standards that must be applied to the design of the REDD+ program and the activities that generate emission reductions.
- Support pilot REDD+ activities at local (project) and jurisdictional scales (e.g. CAR or department)
- Secure funding needed to support REDD+ readiness and implementation and maintain the REDD+ program

- Advocate internationally for market-based and payment-for-performance based approaches and a wide acceptance of Colombian carbon credits
- Use future taxes or environmental fees and royalties to finance projects today, e.g. through municipal bond issuance

If Colombia can build the missing components of its REDD+ program it will maximize its participation in market-based and payment-for-performance based mechanisms. This in turn will allow investors to make affirmative investment decision regarding investing in REDD+ in Colombia. However, if investors do move ahead and support REDD+ activities in Colombia, the demand side of the equation is not yet ready to absorb a large volume of REDD+ emissions reductions given the slow evolution of international compliance markets that accept forest carbon credits. This, however, can be positive as it gives the country time to develop measurement & monitoring activities and national versus regional project carbon accounting systems that will hopefully become operational as demand grows. On the other hand it is less than optimal for the local communities that need support now in the face of deforestation and degradation. Additional interim funding would help to meet this need of local communities.

U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

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