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Guyana

Readiness Preparation Proposal (R-PP)

World Bank
Forest Carbon Partnership Facility
(FCPF)

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Acronyms

CI- Conservation International
EPA- Environmental Protection Agency
FCPF- Forest Carbon Partnership Facility
OCC - Office of Climate Change
OP- Office of the President
GEA- Guyana Energy Agency
GFC- Guyana Forestry Commission
GGDMA- Guyana Gold & Diamond Miners Association
GGMC- Guyana Geology & Mines Commissioner
GL&SC- Guyana Lands & Surveys Commission
GoG- Government of Guyana
IDB- Inter-America Development Bank
IPCC GPGs- Intergovernmental Panel on Climate Change Good Practice Guidelines
LCDS- Low Carbon Development Strategy
LULUCF- Land Use Land Use Change & Forestry
MoA- Ministry of Agriculture
MoAA- Ministry of Amerindian Affairs
MRVS- Monitoring Reporting & Verification System
MSSC- Multi Stakeholder Steering Committee
NBMP- National Biomass Monitoring Plots
NCC- National Climate Committee
NRWG - National REDD+ Working Group
NTC- National Toushaos' Council
PSP- Permanent Sample Plots
REDD +- Reducing Emissions from Deforestation & forest Degradation +
R-PP- Readiness Preparation Proposal
RS- REDD Secretariat
SFM- Sustainable Forest Management
UNFCCC- United Nations Framework Convention on Climate Change
WB- World Bank
WWF- World Wildlife Fund

Executive Summary

Guyana

Guyana's population is 751,223 (Census 2002, Bureau of Statistics). Its 215,000 km² (approximately 83,000 square miles) of territory is divided into 10 administrative regions with most people and economic activities in the coastal plain. The low population density and difficult terrain in some regions make it costly to provide extensive social services and develop infrastructure critical to support economic production. Guyana's legal system is based on English common law with certain admixtures of Roman-Dutch law. The country is governed under a Westminster type model, with a President as Head of State, a Prime Minister, and Cabinet of Ministers appointed by the President. Guyana's legislative system is based on the National Assembly, which comprises 65 seats; to serve five-year terms. With regards to the Judicial System, there is a Supreme Court of Judicature, consisting of the High Court and the Court of Appeal, with right of final appeal to the Caribbean Court of Justice.

Climate Change & Guyana

Developing countries like Guyana are vulnerable to the effects of climate change. Guyana will face serious challenges from sea level rise and extreme weather events such as intense rainfall and extensive dry periods. It has been observed that the frequency and intensity of weather events such as floods, hurricanes, drought, etc. are on the rise both globally and locally.

The tide gauge data for Guyana has indicated a mean relative sea level rise of 1 cm/yr. It is anticipated that if action is not taken to reduce the amount of greenhouse gas emissions globally to reverse this trend, sea level may continue to rise at a rate ranging from 40cm —60cm by the end of the 21st Century. Projections show that the sea level rise will continue for centuries and that the melting of the polar ice sheets is expected to continue to fuel sea level rise well after 2100. According to local and Caribbean experts, most of the climate models for the region indicate that we are in for a long term change which will not only bring more rains, but ironically more droughts also. The weather pattern is expected to create climate of extremes. Sea level rise and extreme weather events will have a direct impact on Guyana and the livelihood of its people. The main expected impacts include water shortage, decreased yields from agriculture, infrastructural damage, flooding, health problems, environmental changes and economic losses. Though many do not understand the complexities of climate change, Guyanese have already started to note, with concern, the trend of above normal rainfall and the frequency with which longer, wetter spells occur.

Recently, Guyana has experienced several precipitation events that have led to severe damage. To name a few examples: intense rainfall in May-June 1996 at Moco-Moco village, in the south west of Guyana, resulted in flooding along rivers for several weeks. During the 1997-1998 El Niño, below normal rainfall was observed in Guyana, which caused huge severe drought and losses in agriculture. Heavy precipitation in January 2005 resulted in unprecedented flooding along the coast of Guyana resulting in severe physical damage and economic loss to the country. The magnitude of the damage caused by the floods that affected Guyana was estimated to be equivalent to 59 percent of current GDP for the year 2004.

These unusual weather events are already proving to be more than a mere inconvenience; they are having serious consequences on one of the most critical sectors in Guyana's economy, the agriculture sector. Guyana's agricultural sector is the major contributor to the country's economy, contributing over 30 percent of Guyana's Gross Domestic Product (GDP) annually, 30 percent of employment and 40 percent of export earnings¹. The rice and sugar sectors alone are the two largest contributors to foreign exchange earnings. This coupled with the fact that 90 percent of our population lives on the relatively flat coast, which is below mean sea level, and 70 percent depend on agriculture and agricultural related activities for their livelihood indicates the importance of the sector and the vulnerability to extreme weather events. Many experts believe the current weather is just the start, more extreme weather is to come. As the country's climate changes, we have to adapt to the change and at the same time put measures in place to deal with the impacts of the global change in climate. Some of the major challenges which will have to be confronted are:

- Over topping of sea defences
- Protection of agriculture lands , crops and livestock

¹ http://www.caricom.org/jsp/community/donor_conference_agriculture/agri_profile_guyana.jsp

- Protection & possible relocation of human settlements
- Protection of ground water resources and domestic water supply
- Prevention & treatment of new & emerging diseases
- Protection and maintenance of infrastructure e.g. drains, sluices & dams
- Socio-economic challenges

However, as Guyana continues to document the unusual weather patterns, long term analysis will provide a better picture of how our weather is changing and enable Guyana to make predictions which can guide development planning. Meeting the challenges imposed by sea level rise and extreme weather events will need significant financial, technical and human resources and; a responsible effort by all citizens to contribute meaningfully to reduce the effects of climate change.

Deploying Guyana's Forests in mitigating the effects of climate change

Guyana's pristine forest covers 85 percent of the total land area, contains over 5GtCO₂ above ground biomass, and is estimated at 18.3M hectares by WRI and UN FAO. Guyana has had relatively low historical rates of deforestation (0.1 percent to 0.3 percent (UN FAO FRA 2005, Colchester 1999)). However, Guyana's national circumstances clearly indicate that if incentives and governance are not directed to controlling deforestation and degradation, both of these rates and their associated emissions are expected to significantly increase.

Guyana is a good example of the need to include REDD+² activities in a country with historically low rates and emissions because of several reasons:

- 1) Much forest suitable for logging and conversion to agriculture remains intact due to efforts both by the Government agencies and the local communities including the Amerindian People;
- 2) There are growing national and regional demands for agricultural products and tropical timber;
- 3) Access to Guyana's forests will be significantly increased during this decade. Most notably, a major international highway from Brazil through southern Guyana to the north coast will be built;
- 4) Brazil has a very large and dynamic human population that could rapidly move into Guyana for both logging and agricultural activities;
- 5) Implementation of REDD + and other conservation measures in Brazil leads to a high potential for international leakage of deforestation and degradation into Guyana, via the planned transnational highway.

Deforestation and degradation occur mainly in the State Forest Estate where logging, mining and agricultural activity co-exist, as well as in the forests on Amerindian and other private lands. Deforestation and forest degradation are driven by four principal factors, namely: 1) the targeted harvesting of a limited number of prime commercial species, with little emphasis being placed by the loggers on efficiencies; (For example conducting preharvest inventories to inform utilization, pre-identification of markets before harvesting, utilization of equipment such as portable mills to gain higher conversion rates etc) 2) the clearing of forested areas for mining; 3) the conversion of forested areas to allow for agricultural activities; 4) infrastructure development such as roads.

While most forested countries have high rates of deforestation with their forest areas on the decline, Guyana has 85 percent of its land area covered in forest. As a developing country, the GoG can choose to utilize the forests and to extract its resources to obtain revenue which is needed for growth and development as a nation

The Government of Guyana believes that Government agencies in active collaboration with local communities and non-governmental agencies can protect and maintain the forests in an effort to reduce global carbon emissions and at the same time attract resources for the country to grow and develop. The implementation of a REDD + strategy is viewed as an avenue through which this can be achieved.

The resources garnered through this initiative would in turn be used to develop low emission economic activities, thus reducing poverty, improving social services (health, education) deliveries, promoting sustainable development and achieving the Millennium Development Goals (MDG).

Guyana's Low Carbon Development Strategy (LCDS) & REDD+

Guyana's draft Low Carbon Development Strategy sets out a vision through which economic

² For purposes of Guyana's R-PP, REDD + should be construed to mean activities consistent with paragraph 1 (b) (iii) of the Bali Action Plan. Further, Conservation in this paragraph should be construed to include avoided deforestation in the context of Guyana's R-PP.

development and climate change mitigation will be enabled through the generation of payments for forest services in a mechanism of sustainable utilization and development. The result is intended to be the transformation of Guyana's economy whilst combating climate change. The Strategy has four key dimensions: (1) value of Guyana's forests (mitigation), (2) low carbon development opportunities, (3) adaptation plans, and (4) the involvement and socio-economic development of all Guyanese.

If Guyana achieves this, it would be able to protect its forest and simultaneously seek a development path that promotes the growth of low-carbon economic sectors and reduces deforestation and high-carbon economic activity.

The LCDS and REDD + are integrally linked with the former being the strategic framework and the latter the operational mechanism that will enable the model to be executed and monitored. REDD + therefore forms one part of the LCDS.

The LCDS notes that a successful REDD + will require generating a willingness to participate from forest countries because REDD + is a positive development option. It will also require generating a willingness to pay from international sources, whether public or private, because it reduces greenhouse gas emissions. But if these twin sets of objectives are met, Guyana will be able to invest in creating a low deforestation, low carbon, climate resilient economy where:

- Guyana can avoid cumulative forest-based emissions of 1.5 gigatons of CO₂e (carbon dioxide equivalent which includes other greenhouse gases) by 2020 that would have been produced by an otherwise economically rational development path.
- REDD + payments can enable Guyana's economy to be realigned onto a low-carbon development trajectory. Guyana can generate economic growth at or in excess of projected Latin American growth rates over the coming decade, while simultaneously eliminating approximately 30 percent of non-forestry emissions through the use of clean energy.

Guyana Norway Partnership

On November 9, 2009, the Governments of Guyana and Norway signed a Memorandum of Understanding which set out how the two countries will "work together to provide the world with a relevant, replicable model for how REDD-plus can align the development objectives of forest countries with the world's need to combat climate change." Norway committed to providing financial support of up to US\$250 million by 2015 for results achieved by Guyana in limiting emissions from deforestation and forest degradation.

Definition of objectives, approach, and responsibilities for the R-PP process:

The general objectives of the Proposal are to identify and conduct analytical and diagnostic studies relevant for designing Guyana's REDD + strategy, to design a Monitoring, Reporting, and Verification system as well as the Management, Implementation, and Evaluation during the readiness preparation phase and to present studies, conduct consultations and other preparation activities in the preparation phase that are centered on the six components of the Readiness Preparation Proposal (R-PP).

Through this readiness preparation phase, Guyana would aim to implement REDD+ activities geared towards the future implementation of REDD + strategies and transactions. This readiness phase would aim to design Guyana's REDD + readiness package, which would include: a Reference Scenario, an MRV system, a set of REDD + strategies to be implemented, a conducive strategic/ policy framework, a continued Consultation/Participation Plan, and an equitable benefits-sharing mechanism.

The GFC has conducted a series of Awareness Sessions, targeting Amerindian communities, villages as well as other stakeholders, from government, non-government and other interest groups, in all of the 10 administrative regions of Guyana. Amerindian communities and other local stakeholders/forest users will be involved in all stages of consultations. Their input is very important to the proper design of a REDD + Strategy as well as the benefits sharing system. The main objective of these sessions was to inform stakeholders of the REDD + initiative which the GFC would be implementing and the potential implications, risks and opportunities and to receive their initial feedback. Initial stakeholder feedback as it related to the implementation of this initiative was recorded and will be taken into account during readiness preparation activities. These awareness sessions are considered to be the prelude to the official REDD + Consultations which will take place during the Readiness preparation phase.

The R-PP proposes a Strategic Environmental and Social Assessment (SESA) of the potential impacts of REDD + on the local environment and livelihoods to be conducted during the preparation phase. These impacts will be assessed and quantified and based on this, appropriate mitigation measures to address these impacts will be developed. This Assessment will be conducted in keeping with applicable World Bank Safeguards.

A national Monitoring, Reporting and Verification System will also be developed along with the development of historic and future reference scenarios. Guyana's low historical deforestation and degradation emissions do not accurately predict immediate expected future higher emissions. Guyana's reference scenario will include modeling of these probable future projected emissions.

The Proposal will involve all stakeholders in the designing of the REDD + Strategy. This will be conducted in a participatory manner with emphasis on consultations with local communities and villages.

The readiness preparation process will work through the following three elements, with an aim of reducing poverty and promoting the development of Guyana: a) inter-agency coordination and institutional capabilities, b) stakeholders involvement especially community and Amerindian development and c) technical programmes. Overall, while the REDD + Strategy will be centred on reducing rates of deforestation and degradation, and on reducing poverty and improving livelihoods through the implementation of appropriate and feasible alternative economic activities; it will also focus on the development of a well designed and equitable benefits sharing system.

The preparation phase will also emphasize the need for a high level of political commitment and for the involvement of multiple sectors and Government institutions, which are both required for the success of REDD +.

One of the areas that will be addressed under the readiness preparation phase will be that of land, tenure. Advancing efforts in the titling process has therefore been identified as one aspect of component 2b (REDD + Strategy, Potential REDD + Activities). Amerindian communities, by law, have the right to the management of titled indigenous lands and their potential use in REDD + activities. Their participation in the REDD + programme will not be mandatory but rather optional. Communities will therefore choose whether they would like to get involved following careful decision making after having been fully informed by the GoG. This will be done after appropriate consultations with communities. Communities that are not ready to participate in activities can do so at a later stage. Communities will have an opportunity to do so once they are ready. With regards to untitled Indigenous communities, consultations will be done with these groups and following titling, these communities will also be given an opportunity to participate in the readiness programme. Extending the titling process to untitled communities is another important consideration for the REDD + Strategy. This is considered as an essential element to ensure that the Amerindians have the rights to their resources.

Indigenous people and other forest dwellers are a key stakeholder group for the REDD + preparation phase. They have an important and direct role to play in ensuring their benefits are secured and their livelihoods are maintained. They will participate in discussions so as to ensure equity in the distribution of REDD + benefits, secure land rights and promote REDD + as an instrument to improve livelihoods. They will also participate in the design of alternative economic opportunities; providing local knowledge of the forest and its past uses; training & forest policy; field based technical work, data collection & monitoring; and information sharing and dissemination

Guyana's proposed outline of readiness preparation activities has been organised under the general guidance of the FCPF. As reflected in the general structure of the R-PP, the various activities and proposals are outlined under these six key areas.

Component 1: Organize and Consult

1a. National Readiness Management Arrangements

REDD Secretariat & the National REDD Working Group

As part of Guyana's efforts to provide an enabling environment for the facilitation of REDD + activities, the REDD Secretariat (RS) has been established as a part of the Guyana Forestry Commission (GFC). This Body will be responsible for the coordination of all national REDD + activities, under the direction of the GFC, and for overseeing the implementation of REDD + activities under the Low Carbon Development Strategy framework.

The Guyana Forestry Commission has developed a set of procedures to guide both the R-PP preparation and the REDD + implementation processes in Guyana. Component 1 presents the basic guidelines for the REDD + management and governance, consultations and outreach. Each of these three items is further developed as components 1a (Management), 1b (Consultations) presented below.

REDD + Management and Governance System

This Component summarizes the main institutional arrangements proposed for the ongoing REDD + activities, including guiding principles, objectives, methodologies and institutional agreements prepared so far that pertain to management of readiness as well as consultation and outreach activities.

Guiding Principles

- Transparency: will be achieved through rigorous social accountability mechanisms.
- Civic Engagement: will be achieved through an inclusive participatory process.
- Community Empowerment: indigenous and other grassroots communities will be empowered through capacity building, knowledge sharing, information and technical assistance.

Strategic Objectives

- Incorporate the needs and expectations of indigenous peoples, forest dwellers and other segments of Guyana's society into the National REDD + Framework
- Engage the Guyanese society in the REDD + Dialogue
- Develop and Implement an equitable Benefits Sharing System
- Design and implement an efficient Consultations and Outreach Plan

Governance & Management Operational Structure

The following Agencies are expected to play a key role in the development and implementation of REDD +:

- The Office of the President (please see table below)
- The Guyana Forestry Commission (please see table below)
- The REDD Secretariat (please see table below)
- The National REDD Working Group

Institution	Role	Responsibilities	Members & Partners
Office of the President	Guide the implementation of the REDD + Activities under the Low Carbon Development Strategy (LCDS)	Overseeing Guyana's involvement in the international REDD + dialogue and partnerships; Guiding GFC and nomination of all REDD +-related boards, committees and working groups.	The President; Members of the Cabinet; Advisors to the President on Climate Change
Guyana Forestry Commission(GFC)	Coordinate all REDD + activities in Guyana	Oversee operations of the REDD Secretariat; Monitoring of RS performance; Overseeing of all REDD + Boards, Committees, Working	GFC's Board of Directors; Staff of the GFC, National Climate Committee of Guyana (NCC)

		Groups and activities; Oversee design and implementation of MRVS.	
REDD Secretariat (RS)	Formed by GFC to implement national REDD + activities and to advise the Government of Guyana on policy formulation under the LCDS framework. Report to GFC and NCC.	Manage permanent operational team for REDD + activities; Prepare a Consultation and Outreach Plan; Organize and Manage the National REDD Working Group (NRWG); Perform regular quarterly meetings and other meetings as needed	<p>Government: Environmental Protection Agency; Guyana Energy Agency; Guyana Geology and Mines Commission; Guyana Lands and Surveys Commission; Ministry of Agriculture; Ministry of Amerindian Affairs; Ministry of Local Government and Regional Development.</p> <p>Civil Society: National Indigenous Community and Advocacy Groups and Organizations: GOIP, APA, NDAF, NTC, TAAMOG; Locally – based international NGOs: Conservation International (CI) and World Wildlife Fund (WWF).</p> <p>Private Sector: Private Sector Commission.</p> <p>Academia: University of Guyana.</p>

The REDD Secretariat

As part of Guyana’s efforts to provide an enabling environment for the facilitation of REDD + activities, the REDD Secretariat (RS) has been established as a part of the Guyana Forestry Commission (GFC). This Body will be responsible for the coordination of all national REDD + activities, under the direction of the GFC, and for overseeing the implementation of all REDD + activities under the Low Carbon Development Strategy framework. In executing this function, the RS will also work in close collaboration with the Multi Stakeholder Steering Committee (MSSC³) of the Low Carbon Development Strategy and the National REDD Working Group (NRWG). The main areas of work of the RS will be the execution of Consultation and Outreach activities, and dissemination of results of the assessment of the carbon stock potential of Guyana’s forests. The Secretariat will report directly to the Guyana Forestry Commission as well as the NCC⁴. In addition to reporting responsibilities, the RS will collaborate with the NCC as necessary. It will also be responsible for overall coordination as well as being the permanent operational team for REDD + nationally. While the REDD Secretariat will be managed and overseen by the GFC, it will not operate in isolation of other sector agencies within the national framework. Rather it will involve inputs and collaboration from the following stakeholders:

- o OCC, OP
- o Ministry of Agriculture
- o Guyana Lands and Surveys Commission
- o Guyana Geology and Mines Commission
- o Non Governmental Organizations such as World Wildlife Fund (WWF), Conservation International (CI), and Iwokrama
- o Civil Society & Others
- o Environmental Protection Agency
- o Ministry of Amerindian Affairs
- o University of Guyana
- o the National Toushaos’ Council, Amerindian NGOs and residents

³ The Multi Stakeholder Steering Committee (MSSC) was established to lead in awareness activities for the Low Carbon Development Strategy. It comprises representation from Office of the President, Minister of Agriculture, Ministry of Amerindian Affairs, Guyana Forestry Commission, Environmental Protection Agency, Guyana Geology and Mines Commission, The Amerindian Action Movement of Guyana (TAAMOG), The National Amerindian Development Foundation (NADF), Guyanese Organisation of Indigenous Peoples (GOIP), North Rupununi Development Board (NRDDB), International Institute for Environmental and Development (IIED), Forest Producers Association, Guyana Gold and Diamond Miners Association, Private Sector Commission (PSC), Trade Unions Congress (TUC), Federation of Independent Trade Unions of Guyana (FITUG), Guyana Labour Union, Women’s Affairs Bureau, Youth Representative from Ministry of Culture, Youth and Sport, Conservation International (CI), World Wildlife Fund (WWF), Iwokrama, National Tushaas’ Council & representatives in individual capacities

⁴ The NCC comprises the Guyana Forestry Commission, Ministry of Agriculture, Ministry of Amerindian Affairs, Civil Defense Commission, Central Housing & Planning Association, Guyana Lands & Surveys Commission, Guyana Sugar Corporation, Guyana Manufacturers Association, Guyana National Bureau of Standards, Environmental Protection Agency, Forest Producers Association, Iwokrama International Centre for Rainforest Conservation and Development, Institute of Applied Science & Technology, Guyana Energy Agency, Hydromet Office, Ministry of Foreign Affairs, National Agriculture and Research Institute, Ministry of Housing & Water, National Drainage & Irrigation Authority, Conservation International, Guyana, Office of Climate Change, Ministry of Local Government & Regional Development, Private Sector Commission, Ministry of Public Works & Communication, University of Guyana

The National REDD+ Working Group (NRWG)

The government intends to also set up a National REDD Working Group (NRWG), comprising representatives of the following agencies and organizations:

- REDD Secretariat
- Ministry of Amerindian Affairs
- National Tshaos Council (NTC)
- Private Sector
- Guyana Forestry Commission
- Office of Climate Change, Office of the President
- Relevant NGOs and Community Groups (including Amerindian NGOs)
- Other relevant Ministries & University of Guyana

The NRWG, while being coordinated and chaired by the GFC, will involve the input of key stakeholders. It is intended that the NRWG have the involvement of relevant agencies/bodies. This will be required both during consultation and outreach, as well as in the development and implementation of REDD + activities.

The National Tshaos Council (NTC)

In accordance with the Amerindian Act, 2006, the National Tshaos Council was established as a body corporate comprising all Tshaos. It outlines that the NTC shall elect an executive committee comprising one Tshao from each administrative region of the country and not more than ten additional Tshaos. Some of the main functions of the NTC as designated by the Act are as follows:

- To promote good governance in Villages including investigating matters as requested by a Village and making recommendations, provided that the NTC may not investigate any matter which has been referred to the Minister and must ensure that any person involved in the investigation is given a reasonable opportunity to be heard;
- To prepare strategies & plans for reducing poverty and improving access to health and education in Villages;
- To prepare strategies and plans for the protection, conservation and sustainable management of Village lands and natural resources;
- To provide advice to the Minister on:
 - The protection of Amerindian culture and heritage, including the identification and designation of Amerindian monuments;
 - The development of Villages;
 - The impact of legislation or policy on Villages and any changes that should be made to such legislation or policy.
- To coordinate and integrate the activities of Villages on a national basis.

Given that the NTC is the democratically elected, national representatives of Amerindian Villages and Communities; the GoG has engaged the NTC in execution of activities under both the LCDS & the RPP. The NTC has been identified to conduct consultation and outreach activities on REDD + and Guyana's RPP on behalf of the GoG. Further, the NTC has been identified to be integrally involved in all aspects of REDD + implementation, including the MRVS. The Chairperson of the NTC is currently a member of the MRVS Steering Committee. (See pages 21, 61)

Social Accountability

Social accountability for REDD + activities will be closely monitored by the National REDD Working Group (NRWG). The group will ensure that specific interest groups such as Amerindians are properly informed about and engaged in REDD +. Its main task will be to secure full transparency in REDD + implementation. Other functions include: a) Inform and engage communities, Amerindian villages, interest groups, and other stakeholders in the REDD + preparation and implementation processes; b) Guide and Monitor the REDD + Consultations and Outreach Plan; and, c) Guide and Monitor the implementation of other REDD + activities. The Ministry of Amerindian Affairs, National Tshaos Council and selected NGOs will be actively involved in the consultation process as they would be part of the planning process as well as will be part taking in organizing and leading some of the sessions.

The NRWG will convene monthly or as need arises to discuss issues and propose recommendations particularly on: a) Monitoring the implementation of the Consultations & Outreach Plan; b) Identify areas in need of capacity building and training; c) Deliberation on any conflicts that may arise (if any); d) Updating on the status of implementation of other REDD + readiness activities.

Criteria for Selection for NRWG Members: the GoG will appoint members of the NRWG according to the following criteria: **a)** Representatives of the Government Ministries, agencies and institutions directly related to LCDS and REDD +; **b)** Civil society representatives directly linked to community groups and/or to Amerindian peoples advocacy organization; **c)** Representatives of academia, private sector and Guyana-based international organizations with relevant knowledge and interest on the subject; **d)** participating NGOs that have previous involvement in forestry, mining, agriculture or other land uses, as well as environmental services management **and** previous interaction with Amerindian groups involving activities in land tenure and natural resources utilization; **and** international experience in carbon financing initiatives (including REDD +) to enable the benefits of lessons learnt from previous experience

Linking the REDD + debate with the overall land use and forest agenda

REDD + will be incorporated into existing forest policy dialogue addressing a wide range of forestry and development topics (e.g., forest policy, land tenure, sustainable forest management, etc.). Decisions made by the NRWG and the RS can be further integrated into relevant national programmes through the higher-level NCC which is primarily responsible for programmes on climate change matters. In addition to this, a process of consultation will be carried out to establish the pros and cons of the REDD + initiative with the agencies responsible for land administration and land use (GGMC, GL&SC, EPA etc). The outcomes will be further discussed with all other stakeholders and subsequent results added to suitable policies so as to address the issues raised by stakeholders at all levels.

Since Amerindian communities and other forest dependent dwellers are important stakeholders in this process, emphasis will be placed on ensuring benefits, land use rights and tenure, and the mitigation of potential environmental and social impacts. This would involve collaborative effort of the REDD Secretariat, the MoAA, Amerindian NGOs, Amerindian Village and Community Leaders and other relevant agencies.

Mining claims will also be addressed through the Land Use Committee, which comprises the heads of the Guyana Forestry Commission, Guyana Lands & Surveys Commission, the Guyana Geology & Mines Commission and the Environmental Protection Agency.

The NRWG will be responsible for the following, among others: (i) Discuss report of the NRWG on progress with consultations;(ii) Review developments in work on identification and demonstration of REDD + candidate activities;(iii) Review progress on SESA; (iv) Receive updates on progress in the design of the MRVS and reference scenarios; (v) Receive updates on progress of land titling process and on designing benefits sharing system.

Reporting Responsibilities

The GFC, on behalf of the NRWG, will provide monthly updates to both the MSSC and the NCC on the progress made by the NRWG, as well as any constraints/ limitations faced by the NRWG.

Outcomes

- 1.Coordinating and or overseeing all REDD + readiness studies and activities listed in the present R-PP and ensure active participation of all stakeholders;
- 2.Ensuring coordination and synergies amongst all policies and government programmes related to the REDD + process in Guyana;
- 3.Ensuring the quality and inclusiveness of consultations;
- 4.Identifying issues, addressing conflicts and proposing remedies for the way forward.
- 5.Development of protocol to deal with complaints & conflict resolution as well as design and implementation of a pro-active communication strategy (also include this point in the text above)

REDD+ Management and Inclusive Governance Work Programme: The table below shows the required management and inclusive governance activities to be implemented:

Main REDD + Activities	Strategy	Year 1	Year 2	Year 3
Establish a functional REDD Secretariat	Select, Compose, Nominate staff of the RS			
	Promote Institutional Strengthening of RS			
	Prepare On-Going Capacity Building Plan for RS			
	Prepare and Revise RS Calendar and Agenda			
	Provide RS with adequate Operational Support			
	Prepare Consultations Plan			
	Implement Consultations and Outreach Plan			

Operationalise a NRWG	Review progress in implementation of consultation and outreach activities and identify of next steps			
	Review of educational materials to be used during consultation and outreach sessions			
	Assist in the identification of alternative economic activities which the communities would be interested in pursuing and review progress in the status of implementation of these activities			
	Identify areas for capacity building and training			
	Identify issues/constraints encountered and propose recommendations and abatement measures			
	Assess the effectiveness of the consultation and outreach process and make recommendations and adjustments on how to improve it			
	Develop and implement conflict resolution strategy & investigations of complaints			

Performance Indicators: The REDD + Management and Inclusive Governance System will be monitored through RS and NRWG. Evaluations will be performed based and in compliance with the World Bank’s SESA requirements.

Summary

As part of Guyana’s efforts to provide an enabling environment for the facilitation of REDD + activities, the REDD Secretariat (RS) has been established as a part of the Guyana Forestry Commission (GFC). This Body will be responsible for the coordination of national REDD + activities and for overseeing the implementation of all REDD + activities under the Low Carbon Development Strategy framework. In executing this function, the RS will also work in close collaboration with the Multi Stakeholder Steering Committee (MSSC⁵) of the Low Carbon development Strategy and the National REDD Working Group (NRWG). The main areas of work of the RS will be the execution of Consultation and Outreach activities, and dissemination of results of the assessment of the carbon stock potential of Guyana’s forests. The Secretariat will report to the Guyana Forestry Commission as well as the NCC ⁶of Guyana. In addition to reporting responsibilities, the RS will collaborate with the NCC as necessary. It will also be responsible for overall coordination as well as being the permanent operational team for REDD + nationally. While the REDD Secretariat will be managed by the GFC, it will not operate in isolation of other sector agencies within the national framework.

The National REDD Working Group (NRWG) will be established with the intention of having the involvement of relevant stakeholder groups, including representatives from Amerindian groups, civil society, NGOs, the private sector, educational institutions as well as from the natural resources management agencies during implementation of consultations and the active involvement in REDD + activities. It will be the oversight and advisory body for the REDD + consultations and implementation. The consultation and outreach programme will be planned and executed in accordance with the national agenda for consultations on both the LCDS and REDD +.

⁵ The Multi Stakeholder Steering Committee (MSSC) was established to lead in awareness activities for the Low Carbon Development Strategy. It comprises representation from Office of the President, Minister of Agriculture, Ministry of Amerindian Affairs, Guyana Forestry Commission, Environmental Protection Agency, Guyana Geology and Mines Commission, The Amerindian Action Movement of Guyana (TAAMOG), The National Amerindian Development Foundation (NADF), Guyanese Organisation of Indigenous Peoples (GOIP), North Rupununi Development Board (NRDDB), International Institute for Environmental and Development (IIED), Forest Producers Association, Guyana Gold and Diamond Miners Association, Private Sector Commission (PSC), Trade Unions Congress (TUC), Federation of Independent Trade Unions of Guyana (FITUG), Guyana Labour Union, Women’s Affairs Bureau, Youth Representative from Ministry of Culture, Youth and Sport, Conservation International (CI), World Wildlife Fund (WWF), Iwokrama, National Toshias’ Council & representatives in individual capacities

⁶ The NCC comprises the Guyana Forestry Commission, Ministry of Agriculture, Ministry of Amerindian Affairs, Civil Defense Commission, Central Housing & Planning Association, Guyana Lands & Surveys Commission, Guyana Sugar Corporation, Guyana Manufacturers Association, Guyana National Bureau of Standards, Environmental Protection Agency, Forest Producers Association, Iwokrama International Centre for Rainforest Conservation and Development, Institute of Applied Science & Technology, Guyana Energy Agency, Hydromet Office, Ministry of Foreign Affairs, National Agriculture and Research Institute, Ministry of Housing & Water, National Drainage & Irrigation Authority, Conservation International, Guyana, Office of Climate Change, Ministry of Local Government & Regional Development, Private Sector Commission, Ministry of Public Works & Communication, University of Guyana

ACTIVITIES	Year 1	Year 2	Year 3
Execute of the day to day operational mandate of the RS			
Coordinate & execute the national Consultation and Outreach Plan			
Development of a protocol to deal with complaints & conflict resolution			

Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Manage and operate the REDD Secretariat	Execute the day to day operational mandate of the RS	115,000	105,000	100,000		320,000
	Coordinate & execute the national Consultation and Outreach Plan	40,000	40,000	35,000		115,000
Develop conflict resolution mechanism	Development of a protocol to deal with complaints & conflict resolution	25,000				25,000
Total		180,000	145,000	135,000		460,000
Domestic Government		30,000	30,000	20,000		80,000
FCPF		150,000	115,000	115,000		380,000
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

1b. Stakeholder Consultation and Participation

The Government of Guyana has placed climate change issues at the top of national priorities through integrating itself into the REDD + international agenda while securing full local engagement from the Amerindian villages and communities of Guyana in particular and of the Guyanese society as a whole. The GoG has undertaken work at both the strategic and operational levels, with the launching of Guyana's draft Low Carbon Development Strategy (LCDS) as well as REDD + readiness activities.

With this mandate the GFC will conduct communications and outreach activities under the guiding principle of sharing information to promote knowledge sharing, raise awareness, engage society and as a result develop a true participatory REDD + preparation process.

The Government of Guyana is committed to implementing a robust Consultation Plan geared to gathering and sharing information, engaging individuals and communities, so as to strengthen the REDD + implementation with the contributions of the Guyanese people and society. This Consultation Plan is being built upon an extensive previous awareness process.

The long-term success of both the Low-Carbon Development Strategy and the Readiness Preparation Proposal are ultimately dependent on broad-based, inclusive domestic support. A consultation and participation plan is a vital component in achieving this. It is geared to gathering information, issues and opinions from stakeholders and processing it so that possible solutions and policies can be formulated or amended to address concerns of participants. This activity will inform stakeholders, provide training, seek inputs and address issues and concerns raised by stakeholders through a continuous, iterative two way process of outreach programmes, consultations and dialogue, incorporation of ideas and effective dissemination of all relevant information. All aspects of this stakeholder consultation and participation plan will be based on the principle of free prior and informed consent.

Guiding Principles: a Consultation process will be built upon the principle of: free, prior and informed consent;

Strategic Objectives: Consultations will be held to reach the following strategic objectives: a) Gather, process and incorporate stakeholders contributions as part of the REDD + policies and procedures; b) Build a two-way communication process through which individuals and communities feel informed about and get the opportunity to fully engage in REDD +; c) Develop a consultation operational strategy to jointly promote communications and capacity building at the community level;

Methodology: Consultations will be designed and conducted according to national and international standards. Below are the key, main steps to which this Plan will abide:

- **Consultations Plan Preparation:** The key to having a strong, respected consultation plan is to develop a draft of a consultation plan, validate this draft with key stakeholders, finalize the plan and then start the consultation process.
- **Plan Validation:** the Plan will be revised and validated during a Validation Workshop that will be held.
- **Incorporation into R-PP:** Once revised and validated, the Plan will be fully incorporated as part of the R-PP.
- **Dissemination Strategy:** Plan will be disseminated amongst Amerindian villages and communities, forest dwellers and all other interested audiences through a consistent, ongoing communications strategy.

Amerindian Dissemination Strategy: The Government of Guyana is committed to broad dissemination of the Consultation Plan. Special attention and effort will be put into the proper dissemination of the Consultation plan and activities among the Amerindian villages and communities.

Amerindian Sensitization Mechanisms: the NTC will assist in the sensitization process which includes: a) speaking to the communities and villages; b) revising printed and other dissemination materials to be brought to the communities and villages; and, c) organizing and accompanying the consultations process.

- **Information Materials:** All information materials will be developed in a user friendly format, so that the Amerindian villages and communities will be able to fully understand its content and therefore make free, informed decisions on its contents.
- **Dissemination Calendar:** Materials will be sent to communities at least 30 days before a given, scheduled consultation process is to be held.
- **Dissemination Messengers:** NTC, NGOs and other partners will be engaged to disseminate information among the community leaderships, so that they fully understand the opportunity and the responsibility of promoting the dialogue within the community, and that the consultations held will indeed represent the understanding and the will of the whole community.
- **Consultation dynamics:** consultations will be conducted at the village & community, regional and national levels; Reports from consultations will be sent back to stakeholders in a timely manner and feedback will be sought on the content of the reports.

- **Consultations Implementation:** Consultations will be implemented in a timely manner, with the proper materials, and to achieve pre-determined objectives/products.

It is important to note that all Amerindian stakeholders will be involved, i.e. from both titled and untitled communities. Issues affecting both groups of stakeholders will be recorded, to be taken into consideration during the readiness phase.

Tentative Consultations Timeline

Activity	Strategy	Year 1	Year 2	Year 3
Consultation Plan	Prepared Draft			
	Organize Validation Workshop			
	Finalize Consultations Plan			
	Add Final Version to R-PP			
	Disseminate Plan			
	Implement Plan			
	Incorporate Consultations Findings into REDD + Policies			
	Report Consultation Findings			
	Provide Feedback to Consultation Stakeholders			
	Publicize Consultation Findings			

Constraints & Limitations

Some of the constraints that have been identified are as follows:

1. Many communities and villages are located in remote areas and as a result, communication and access to these communities will prove to be a challenge;
2. During consultation session, some segments of villages, communities and the wider population may not participate as fully as other segments.
3. There may be overlapping and conflicting suggestions from various communities.

Expected Outcomes

1. Higher levels of understanding of the concept of REDD +, the roles that different stakeholders will play in REDD + as well as the benefits, risks and challenges that arise from the implementation of a REDD + Strategy;
2. Active involvement of stakeholders in REDD + process
3. Involvement of stakeholders in developing and implementing the MRVS
4. Opposition/ concerns are well documented and integrated into the R-PP
5. Development of an appropriate communications strategy
6. Stakeholders involved in the development of an equitable benefits sharing mechanism
7. A final REDD + strategy based on broad consultation with stakeholders.

Dissemination of Information

All records of the consultation process will be kept so that feedback on key issues raised during the consultation can be responded to in a timely and appropriate manner. Relevant stakeholders will be informed of the outcomes and how their inputs will be used. The outcome of these consultations will be incorporated into related strategies and programmes.

Since the consultation and outreach plan is seen as a means of achieving a goal and not the goal itself, the process will be done on a continuous basis so as keep stakeholders informed to deal with any issues that may arise before, during and after the implementation of REDD +.

The NRWG will be the main means by this communication will be facilitated. Though this, information can be disseminated by the GFC/RS to Amerindian communities, villages and other forest dependent groups. Information will also be exchanged from the communities to the GFC/RS though this Committee. Communications will also be transmitted via the GFC field stations located around the country as well as through the Ministry of Amerindian Affairs and the National Tshaos' Council.

Previous Awareness Sessions Conducted

Previous REDD sensitization/awareness sessions were held with 27 Amerindian villages and communities and other forest dwellers from September, 2008, to January, 2009.

Topics Discussed: Besides the specific issues of each group and/or community, information was also shared and broader topics such as Climate Change and its implications for the forest livelihoods were also discussed during meetings. Likewise, discussions were held extensively on the potential benefits of REDD and the eventual risks it may bring to the communities. A main topic of discussion, only briefly touched on so far, was the one of Benefits Sharing.

Issues that were raised: Specific issues were raised during awareness sessions were incorporated into the current version of the R-PP. Some of them are listed below:

- **Community Sustainable Development Plans:** Most communities wanted to take advantage of the consultation process to also develop their sustainability plans. GFC was requested to develop a consultation methodology to allow for these plans to either be prepared or enhanced during the REDD dialogue.
- **Consultation Processes:** Most communities expressed support to REDD but concerns about the REDD Consultations processes. Mitigation measures were proposed and incorporated into the Consultations Plan.
- **Forest Fires, mining and deforestation and forest degradation** were issues that were raised during a few community meetings. The unsustainable use of natural resources and ways better manage these were areas of major concerns among all the constituencies consulted.

Lessons Learned: The main lessons learned so far:

- a) **Communities want to be engaged:** Communities want to be prior informed to be able to conduct productive dialogues so that they can be effectively engaged in the REDD + process;
- b) **Communities want to have concrete results along the way:** A concrete result expected from the communities will be a plan with sustainable economic alternatives to enhance their livelihoods while protecting the forests; and
- c) **Communities want to be part of the broader, national dialogue:** Communications and civic engagement strategies such as national meetings will be developed in order to attend this demand.

Communication and Outreach

Information System

An information system will be build to ensure that there is efficiency in delivery, involving the GFC, RS and the NRWG. This information disclosure system will be secured through the creation of permanent communications channels among the GoG and relevant organisations. A first activity for GFC will be to create a communications network to link all the key actors involved with REDD +. This network will be essential to the establishment of a common language and a proper communications identity to REDD +.

Target Audiences

It is within this framework that activities will be developed, aiming primarily at informing the following national stakeholders:

- **Internal:** Staff of GFC, RS, and NRWG.
- **National:** Citizens and society as a whole: ministries, agencies, civil society and community organizations; Indigenous people; academia; private sector; government and institutions; vehicles of communications.
- **International:** international community and others.

Adequate Approach to Each Audience

- **Media:** the GoG and GFC will take advantage to the maximum extent of the media coverage generated by the ongoing implementation of the REDD + activities. Instruments such as the preparation of press kits, press releases, video clips, editorials and sites will be prepared to take full advantage of the media to foster information dissemination on REDD + amongst the Guyanese society.

- **Electronic Updates:** Electronic updates will be prepared and posted on a news page regularly to provide external audiences with up-to-date information on REDD + implementation activities.
- **Newsletter:** Given the current communication difficulties in Guyana's hinterlands, a bi-annual print newsletter will be issued for broad distribution among specific target external audiences throughout the country.

Communications Goals: The Government of Guyana through the GFC and RS has defined several communication goals for REDD +.

- **Institutional:** Broad dissemination of Guyana's national and international dialogue and commitment to implementation of REDD +.
- **Global:** Grant total transparency to Guyana's innovative and pioneering initiatives and consequently broaden international support for Guyana's RPP.
- **Internal Communication:** the GFC will commit to maintaining a fruitful ongoing dialogue, to motivate further civil society, academia, private sector and other parties, and to avoid preventable conflicts and miscommunications.

Basic Communications and Outreach Tools

- Institutional Press Kit
- Web Site
- Electronic and Print Newsletters
- Internet Articles and Videos
- Specific Publications for Amerindian villages and communities

Summary of Awareness Sessions held in the development of the R-PP:

A number of awareness sessions were held over the period September 2008 to January 2009. These sessions targeted the following groups of stakeholders:

- Amerindian communities & villages as well as other forest dependent groups
- Loggers & miners
- NGOs (local and international)
- Government ministries and agencies
- General public (including students)
- Other private sector entities

The sessions sought to garner stakeholder involvement through an informal and participatory approach which engaged the participants in discussions on climate change and its implications for the future of forest dependents persons from both an environmental perspective as well as a socioeconomic one. It then addressed the benefits of implementing a REDD + strategy and demonstrated to the audiences how they could get involved in this, as well as the benefits that could be derived.

During the sessions, the GFC/RS discussed alternative economic opportunities that the forest dwelling communities and villages could embark upon once REDD + was fully implemented to supplement their income.

Some of the key issues raised include:

1. Whether there would be a system in place to facilitate community engagement in **alternative economic activities**.
2. The need to make **optimal use of forest resources** was also highlighted by communities in making the point of moving towards added value forest activities for the benefit of the community.
3. The occurrences of **forest fires** within the savannah areas of Region 9.

Some of the inputs received from these sessions have been incorporated into the various components of the R-PP.

Consultation and Participation Plan:

A consultation and participation plan is a vital component for the preparation of the Readiness Preparation phase. It is geared at gathering information, issues and opinions from all stakeholders and processing it so

that possible solutions and policies can be formulated or amended to address concerns of participants. This activity will inform stakeholders, provide training, seek inputs and address issues and concerns raised by stakeholders through a continuous, iterative two way process of outreach programmes, consultations and dialogue, incorporation of ideas and effective dissemination of all relevant information. All aspects of this stakeholder consultation and participation plan will be based on the principle of free prior and informed consent.

ACTIVITIES	Year 1	Year 2	Year 3
Development of outreach material			
Conduct consultation activities, workshops and seminars			
Dissemination of materials for consultations through various media			

Proposed Work plan for the Consultation & Participation Plan

Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Conduct Preparatory Activities for Outreach	Development of outreach material	130,000				130,000
Conduct Consultations	Conduct consultation activities, workshops and seminars	100,000	150,000	150,000		400,000
Public Awareness and Updating	Dissemination of materials for consultations through various media	25,000	25,000	25,000		75,000
Total		255,000	175,000	175,000		605,000
Government		20,000	30,000	30,000		80,000
FCPF		235,000	145,000	145,000		525,000
UN-REDD Programme (if applicable)						
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

Component 2: Prepare the REDD + Strategy

2a. Assessment of Land Use, Forest Policy and Governance

Several agencies work in concert to address natural resources management issues at the level of policy, planning and management, in Guyana. These include the: GFC, GL&SC, GGMC, MOAA, and the EPA.

The foreseen role of international and local donors is both in lending technical and financial support to activities planned at a national level. The involvement of these bodies has so far contributed greatly to the basic knowledge and technical base available in Guyana.

1. Land use and land tenure system in Guyana

Land Tenure System in Guyana

Land tenure in Guyana is administered under the following categories:

1. Public land
2. Privately owned land

1.1 Public Land

In Guyana, while the State Lands Act gives the Commissioner of Lands and Surveys the right to be the custodian of all public lands, mining activities on State Land is managed by the GGMC and forestry activities in the State Forests by the GFC. With this in place, the national structure provides for the Natural Resources and Environment Advisory Committee (NREAC), the Land Use Committee, Cabinet Sub Committee on Natural Resources, and Cabinet to provide guidance that allows for the integrated management of these key natural resources. As such, tenure to a particular area with multiple potential uses is enabled through these Committees.

Land uses are classified into the following areas:

- a. forestry
- b. mining
- c. agriculture
- d. protected areas
- e. other land based uses

Publicly owned lands comprise State Lands and Government Lands. State Lands, formerly called Crown Lands, are controlled by the Commissioner of Lands and Surveys. However, as mentioned before, the GFC, the GGMC, and the GL&SC administer land that is utilized for forestry, mining, and agriculture, respectively. Each of these three Government agencies may issue licenses and permits for different purposes over the same land space. Government lands are those purchased by, or granted to Government entities to be developed for specific purposes such as hospitals, schools, local government administration, and land development schemes. The lease of State and Government Lands are approved by the President, following a comprehensive, transparent process, while the sale of State and Government Lands has to be approved by the Cabinet.

1.2 Private

Lands that are privately owned are divided into two categories:

- a. Amerindians
- b. Non- Amerindian

How the State Manages Land

The State plans and manages land through the GL&SC in cooperation with the natural resources agencies of Guyana, namely the GFC, GGMC, National Parks Commission. The GLSC was established on June 1, 2001, through the implementation of Act No. 15 of 1999. The establishment of the Commission replaced the

former Lands and Surveys Department of the Ministry of Agriculture. This new Act allowed for greater responsiveness of the institution through improved efficiency and greater accountability. The Commission was established as a semi-autonomous agency to effectively fulfill its mandate. Previously, before there was any established land use planning in Guyana, large tracts of land would be identified, cleared, demarcated and simply distributed for agricultural development and housing. . The GL&SC is in the process of developing regional land use maps to identify areas that can be opened for agricultural and other development. These regional maps zone areas for various forms of land use that would be suitable for the development of the area; land uses such as agriculture, industrial development, cottage industries, infrastructural development etc. These maps assess only State Lands, excluding mining and forestry concessions.

Land Info System- GINRIS

Guyana Integrated Natural Resources Information System (GINRIS) is an interagency database that comprises spatial data on the major land uses in Guyana. This database is housed at the GL&SC. This system was established to develop the GIS capacity in Guyana & to serve as a repository for national GIS information. The objective was to have one central database where all of the information could be stored and accessed. GINRIS has mapping coverage of 1 - 50:000 mapping scale coverage of the country and allows for data sharing by the regulatory natural resources agencies which in turn allows for better coordination amongst agencies. A GIS policy has also been developed that provides for uniform standards in areas such as geo-referencing and digitizing.

2. Institutional and legal framework

Institutional Framework & REDD +

The following describes the various agencies and organizations and a description of their role in climate change & REDD +.

The Office of Climate Change (OCC), Office of the President

The OCC is responsible for overseeing climate change initiatives at the national level and provides direction in climate change and REDD + policy. The overarching policy and developmental framework for climate change in Guyana is the draft Low Carbon Development Strategy (LCDS) of which REDD + is a vital component.

Ministry of Agriculture (MoA)

The Minister of Agriculture has the responsibility for the forestry sector, and a number of departments tasked with overseeing various aspects of climate change adaptation activities, including the Hydrometeorological (Hydromet) Division and the National Drainage and Irrigation Authority (NDIA). The MoA remains integral to the coordination and implementation of REDD + policy and activities. Because lands for agricultural usage are administered by the GL&SC, the MoA works closely with GL&SC in the review of applications for agricultural development. To date, some large scale agricultural business projects are under consideration.

Guyana Forestry Commission (GFC)

The GFC is responsible for the management and regulation of Guyana's State Forest Estate and overseeing the implementation of REDD + activities in Guyana. The GFC's main responsibility is policy implementation, sustainable forest management, community forestry and planning the effective utilization of Guyana State Forest Resources. With regards to private lands, the GFC works with the management structure of private lands to assist in areas of forest activities. The GFC oversees the activities of the REDD Secretariat which is responsible for the implementation of REDD + activities.

The passage of the Forests Act in January, 2009 now provides the GFC with a broader range of powers to implement and regulate enhanced forest practices including conservation operations for purposes of carbon sequestration and environmental services. The GFC is therefore expected to play an increasingly pivotal role in implementation, monitoring, and enforcement of REDD + activities.

The GFC has also been tasked with the responsibility of overseeing the development and implementation of the national Monitoring Reporting & Verification System.

Guyana Geology and Mines Commission

The Mining Act provides for the management of large, medium and small scale mining claims. The GGMC is responsible for regulating all activities in the mineral sector on behalf of the Government as well as to provide the basic prospecting information and advisory services on the available economic mineral prospects. The Commission acts as a national repository for all information relating to geology and mineral resources which will facilitate an understanding of the resource base of the country and provides advice to the government on appropriate mineral policy matters so that Guyana's mineral resources can be rationally developed and utilized.

Environmental management of both large and small scale operations at the field and policy levels are monitored and implemented by the GGMC. Through a memorandum of understanding between the EPA and the GGMC, the EPA has environmental oversight of mining operations.

Guyana Lands & Surveys Commission

The GLSC was established on June 1, 2001, through the implementation of the Guyana Lands and Surveys and Commission Act, Act No. 15 of 1999 (Cap 59:05). The GLSC replaced the former Lands and Surveys Department (LSD) of the Ministry of Agriculture. The GLSC is the state regulatory body for lands. Its primary role is to survey and map the land and water resources of Guyana; to take charge and act as guardian over all public lands, rivers and creeks, to administer and manage public lands to provide land-based information to a broad range of public and private sector entities and interests, and to develop land policy and land use plans.

The GLSC is a semi-autonomous commission that seeks to be self financing. The Act which created the Commission allows for funds and resources to be granted to the Commission by Parliament as well as through other legitimate means. Current shortfall in funds for the Commission is met by Government subvention.

Collaboration amongst Agencies in REDD +

It is expected that undertaking work on REDD +, implementation will involve coordination and collaboration of the GFC and the REDD Secretariat with other Ministries and Agencies. Whilst agencies such as the EPA, GLSC, GGMC, Hydromet Division and the OCC will provide support within their respective mandates, Ministries such as the MoAA, Ministry of Finance (MOF) and other Ministries will also play supporting roles in REDD + initiatives. Locally-based NGOs such as CI, Iwokrama & WWF and relevant community organisations will also contribute to this process.

With the continued work of the Land-Use Committee there would be better, more harmonized land and natural resources legislation, land use policy, and national physical planning.

In the development of the MRVS, there has been the establishment of a MRVS Steering Committee to oversee the establishment and implementation of the MRVS. This Committee will comprise members of both government and non-government groups. To advise this Steering Committee on technical issues regarding the development of the MRVS, a Technical Subcommittee has also been convened. This Subcommittee comprises representatives from the GFC, GGMC, EPA, GL&SC and is chaired by the REDD Secretariat.

Natural Resources and Environment Advisory Committee (NREAC)

The NREAC comprises policy and technical representatives that provide guidance and technical review and support to Cabinet. This sub-committee is chaired by the Prime Minister. This technical committee comprises representation of key Government entities and provides technical review, coordination and guidance. Natural resources issues, e.g. mining, forestry and agriculture are discussed and solutions are developed at this level.

Summary of Key Non-Government Stakeholders & Their Role in REDD +

Ministry/Agency	Expected/Tentative Role in REDD +
Amerindian Communities	Design & implementation of REDD + readiness and REDD + activities. Implementation of pilot projects.
Community-based NGOs	Support the implementation and management of community-based conservation projects.
International NGOs and multi-lateral institutions	Support Government of Guyana, implement projects within Guyana
Private Sector	Finance and implementation of REDD + Projects (comprising the following sectors: forestry, mining, agriculture, tourism, manufacturing, training based

	institutions, financing & financial services who would execute functions that affect REDD + projects through natural resources utilization, directly or indirectly)
Other Forest based Communities	Design & implementation of Proposal. Implementation of pilot projects.
Civil Society	Support and advise on REDD + Projects and implementation.

Summary of Key Government Stakeholders & Their Role in REDD +

Ministry/Agency	Role in REDD +
Office of the President	Political leadership, policy and strategy setting including international representation of climate change issues and agenda for Guyana. Responsible for overseeing implementation of LCDS
National Climate Committee	Policy and strategy relating to climate change adaptation and mitigation. Members come from government, private and public sector, NGOs and other stakeholder agencies
Natural Resources and Environment Advisory Committee	Technical review, coordination and guidance on natural resources issues (e.g. mining, forestry and agriculture)
Ministry of Agriculture	Oversees the forestry sector and the GFC. Remains integral to overseeing coordination of REDD + activities.
Ministry of Amerindian Affairs	Support social, economic and cultural activities in Amerindian communities
Ministry of Finance	Can be expected to become engaged in REDD + if REDD + payments come to the Government of Guyana
Guyana Forestry Commission.	Manage and regulates the utilization of state forest while ensuring an optimum and sustained yield of forest produce and maintenance of the environment
Guyana Geology and Mines Commission	Manage and regulates the extraction of mineral resources of Guyana. Includes granting and enforcing mining licenses.
Guyana Lands and Surveys Commission	Advise the government on policies relating to public lands and land surveys and to administer and enforce all laws to public lands and land surveys.
Environmental Protection Agency	Promote, facilitate and coordinate effective environmental management and protection; and the sustainable use of Guyana's natural resources.
REDD Secretariat	Develop coordinate and implement national policy and Readiness Preparation Proposal for World Bank FCPF
Hydrometeorological Service	UNFCCC Focal point and DNA. Responsible for implementing climate change projects in Guyana.
University of Guyana	Training of personnel at tertiary level. Conducting research into specific REDD + related activities.

Source: *Biodiversity Mainstreaming Through Avoided Deforestation, Guyana Case Study – Second Draft. Conservation International, IDB and GFC. (BMAD-GCS) Project (GY-T1058) Technical Paper D*

3. Amerindian communities and the process of titling Amerindian lands

Land titles have been given in different forms, namely as Amerindian villages, Amerindian areas, and Amerindian Districts. Amerindians hold land collectively, although individual/family parcels are identified and generally accepted at the community level. In some communities, the village council has identified parcels for housing, farming, etc.

Amerindians total approximately 9.2 percent of Guyana's population and currently own approximately 13.9 percent of the land. With regards to land titling, Amerindian communities can be classified into four (4) groups:

- o Titled villages and Titled villages that have applied for extension
- o Untitled communities & communities in the process of becoming titled
- o Villages engaged in a legal process regarding boundary demarcation and other issues
- o Existing communities that do not yet meet the criteria for titling

Amerindian Act 2006

The Amerindian Act 2006 was passed by the National Assembly in February 2006 and assented to by the President in March of the same year. The Act provides inter alia for "the recognition and protection of the collective rights of Amerindian Villages and Communities, the granting of land to Amerindian Villages and Communities and the promotion of good governance within Amerindian Villages and Communities". It defines an Amerindian community as "a group of Amerindians organised as a traditional community with a common culture and occupying or using State Lands which they have traditionally occupied or used."

It further defines an Amerindian Village or Village as "a group of Amerindians occupying or using Village Lands." Village Lands are defined as "lands owned communally by a Village under title granted to a Village Council to hold for the benefit of the Village."

The Act gives Amerindian communities legal ownership over Amerindian lands.

Two of the main important achievements of the Amerindian Act are as follows:

- a) it establishes a procedure for land claims to be settled;
- b) It transfers authority power from the Government to Amerindian Villages and Village Councils. Thus supporting and facilitating local governance.

Land & Land Acquisition under the Amerindian Act

The Amerindian Act allows for Amerindian Villages to make decisions related to:

- o Land Occupancy and sustainable use
- o Traditional Activities

To obtain land under the Act, a community must submit a written application and satisfactorily provide other relevant information such as a description of the area requested. If they already have title to the land, and are seeking an extension, demarcation of the already titled land is a pre-condition to consideration of the extension request. The Minister is then required to cause an investigation into the application. This would involve discussions with the Community. Once the investigation is complete and the Minister approves of the request for title, that title is granted to the Village Council to be held for the benefit of the Village. If an approval is not given, the community can appeal this decision in the High Court.

To date, a total of 96 communities have received titled lands. Amerindian Titled lands are owned communally and administered through an elected Village council. The titling process is an ongoing process that has proven to be very expensive but the Government is fully committed to this process and provides resources for titling and demarcation. Increased technical and human resource to do cadastral surveys will accelerate the process.

In the Upper Mazaruni Region (Region 7), a legal land titling issue involving six Amerindian Villages and the Government of Guyana is currently at the level of the courts. The communities that are involved in this case are Phillipai, Jawalla, Kako, Kamarang Warewata, Wamaradong, and Paruima. This matter is ongoing.

Titled Communities & Titled Communities that have applied for Extension

Ninety-six village communities have title over their lands; Amerindian lands are owned collectively by the whole village and administered through an elected Village Council that has the power to make legally-binding rules for everyone within village lands. Many of these titled communities are surrounded by satellite Amerindian villages.

Extensions

There are currently a number of titled villages that have requested extension to their lands.

Untitled communities & communities in the process of becoming titled

There are currently eleven villages that do not yet have formal legal title, nine of which have submitted requests for title to the Ministry of Amerindian Affairs. With regards to the Upper Mazaruni court issue, it is in regard to a traditional land claim.

Existing communities that do not yet meet the criteria for titling

There are communities that do not yet meet the criteria for titling. These criteria stipulate that a community must have been in existence for 25 years and have a total population of 150 persons.

Economic Activities in Amerindian Communities

Forestry- Once a title is transferred to an Amerindian community, the community owns the forest resources on that land. Under the Act, the community will have a right to decide who can use the forest.

Mining- The Amerindian Act provides two very important rights for Amerindian Communities:

- Amerindians have traditional privilege to mine- this is recognized in the Amerindian Act
- Amerindians have a veto over small-scale and medium-scale mining by external parties on their titled lands except for if there is a larger scale project in the public interest.

Anyone who wants to do mining on titled Amerindian lands must receive consent from the community before they can do so. Although Amerindians do not own the minerals, they will control access. Hence they can negotiate with the miners and attach the conditions they want.

In protecting the Amerindians rights, the Act stipulates that miners must provide the communities with all the information that they need. The Act further provides that communities receive benefits from mining.

The miner needs to also offer employment to the community before he brings employees from the outside. He needs to offer to buy food and materials from the community. While the community is not bound to take up these jobs or offer to sell anything, the miner is obligated to give them the first chance to do so.

With regards to small and medium scale mining, if the community refuses to consent to the activity, then it does not materialize. With regards to large scale mining, if the community refuses to consent to the activity, then that activity cannot take place, unless the Government declares that the mining is in the interest of the public and therefore should go ahead. If the community disagrees with this decision, then they can appeal this in court.

If there has been environmental degradation as a result of mining, Amerindians can seek injunctions through the court, under the Environmental Protection Act, 1996, to stop the activity. They can also ask the court for damages for harm that they might have suffered. Under the Amerindian Act, the miner will have to enter into an agreement with the Amerindian community to take reasonable steps to avoid damage to the environment, to avoid polluting the water supplies etc. Should he breach this agreement, the community can sue him for damages.

With regards to the future identification of large scale mining on Amerindian land, the Amerindian Act 2006 provides for a robust consultation mechanism for large-scale mining (such as prior consultations with local communities, determination by the Amerindian Affairs Minister that the proposed mining is of public interest in mining concessions being subject to village rules, and the provision of legal recourse through the courts). The GoG also confirmed that, since the passing of the Amerindian Act 2006, it has not issued any large-scale mining concessions in the Amerindian lands. The village of Isseneru, Mazaruni, was recently involved in a land issue regarding mining. The issue was taken to Court, and the Court made a pronouncement on behalf of the community.

Agriculture- Agriculture within Amerindian communities exists in the form of shifting agriculture. In this, plots of land are cultivated temporarily. This form of agriculture often involves clearing of a piece of land followed by several years of wood harvesting or farming.

Protected Areas - The State cannot establish any protected areas over titled lands unless the Amerindian community freely gives its consent. With regards to untitled Amerindian lands, the State cannot set up a protected area that will restrict Amerindian rights or privileges to use or occupy that land unless the Amerindian community freely gives its consent.

The Act makes provision for Village Councils to conserve areas of the Village Lands. Part III of the Act deals broadly with governance and expressly provides that the functions of the Village Council are inter alia “to manage and regulate the use and occupation of village lands” and “to promote the sustainable use, protection and conservation of Village lands and the resources on those lands.” The Act further provides for the Village Council to exercise rule-making powers governing among others “the management, use, preservation, protection and conservation of village lands and resources or any part thereof.”

Part III of the Act also allows Amerindian villages to establish conservations areas and to make rules governing such areas within their titled lands. In this regard, Village Councils have the authority to proceed to have rules put into effect for conservation and these rules come into effect when the requirements of “consultation with the village” “consent of two-thirds of members of the village general meeting” and “approval of the minister” and “gazetting” are satisfied.

4. Main forest-based economic activities

Forestry

The GFC is responsible for the management of the State Forest Estate. The GFC has oversight on the enforcement of forest laws and regulations, monitoring and control of social and environmental impacts of operations within the State Forest estate and collection of revenues. The Commission is also responsible for data collection of the national forest resources, conducting of forest resources and inventories as well as making recommendations of forest dynamics (silviculture, planning & allocation of concession areas etc.) and prescribing standards and preparation of operational guidelines for forest management.

Some sections of Guyana's forests are characterized by soils of low fertility, making these areas unsuitable for agricultural development. At the end of 2008, production of 275,319m³ of logs, 18,722m³ of roundwood, 66,958m³ of sawn wood and 20,631m³ of plywood were recorded. Other products including, fuel wood (comprising of charcoal and firewood), split wood (shingles and paling staves), wattles, manicole palm and mangrove bark were also produced in the year. All of the above mentioned products recorded a decline in production volume when compared to 2007.

The forests of Guyana are used for multiple purposes including the harvesting of forest produce, agriculture, mining, research, eco-tourism, sustaining the livelihood of Amerindian communities, conservation and protected areas management and biodiversity reserves protection. Forests are an integral part of Amerindian culture and communities and villages make use of forest resources as a source of food, building materials, fibres for textiles and weaving, medicine, tannins and dyes.

Between 1992 and 2009, the contribution of the forest sector (as a primary product) to GDP has varied between 2.3 percent to 4.9 percent and in 2007 it is recorded at 3.86 percent. Guyana's population varied between 738,965 and 781,164 with a total population recorded at 2007 of 763,719.

Employment related to the forestry sector is estimated at 26,000. This data does not include family based forest use and as such should not be used as indicative of the full importance of forests to rural communities.

Summary of State Forest Allocations

as at December 31, 2009

Classification	Count	Area (Hectares)	% Area Type	% Total Allocation	% State Forest
Production Area Allocations					
State Forest Permissions (SFP)	458	1,671,369	25.0%	21.6%	12.5%
Wood Cutting Lease (WCL)	2	30,535	0.5%	0.4%	0.2%
Timber Sales Agreement (TSA)	29	4,347,939	65.1%	56.2%	32.6%
State Forest Exploratory Permit (SFEP)	4	632,492	9.5%	8.2%	4.7%
Total Production Area Allocations	493	6,682,335	100.0%	86.4%	50.1%
Permanent Research & Reserve Areas					
GFC Forest Reserves	11	17,796	1.7%	0.2%	0.1%
Other Research & Reserve Sites	2	1,032,903	98.3%	13.4%	7.7%
Total Research and Reserve Areas	13	1,050,699	100.0%	13.6%	7.9%
Total Forests Allocated	506	7,733,034		100.0%	58.0%
Unallocated Forests		5,606,980	42.0%		42.0%
Total State Forests		13,340,014			100.0%

Iwokrama Research Site		371,592			
Kaieteur National Park		63,000			

Summary of State Forest Allocations (Source: Forest Sector Information Report Year Review (Jan- Dec 2009))

Mining

Accounting for 10.5 percent of GDP (at factor cost) in 2005, the mining sector has consistently contributed over 15 percent to total goods and services produced in the country. Being capital and labor intensive, the mining industry employs between 15 and 20 thousand workers, which represents approximately 10 percent of the labor force. The mining sector includes both prospecting for and mining for metals, minerals and precious stones as defined in the Mining Act 1989 (Act No. 20 of 1989). Prospecting, exploration and mining operations in Guyana are classified as follows:

- o Large Scale
- o Medium Scale
- o Small Scale

Bauxite mining operations are considered large scale based on the definition of large scale mining operations in the Draft (Amendment) Regulations 2005 made under the Mining Act. Large scale mining operations in Guyana recover ore by open-pit mining. Medium scale mining operations are focused on recovery of gold, sand, loam, laterite and crushed stone. Medium scale gold mining operations are undertaken almost totally by Guyanese investors, however, there are a large number of Brazilian nationals who have invested in the mining sector through formal and informal arrangements with Guyanese nationals. Small scale mining operations are undertaken primarily for the recovery of gold and diamonds. This sector which recovers gold primarily by sluicing and mercury amalgamation, provides employment for a relatively large number of individuals. Some miners undertake small scale underground mining.

The GGMC is tasked with regulating all activities in the mineral sector including providing advice to the Government on mineral policy. It regulates the extraction of minerals from large scale, medium scale and small scale mining operations. As of December 2009, there are 9,970 land claims, each land claim is roughly 27 acres (10.93 ha), which amounts to a total area of approximately 108,972 ha. There are a total of 657 medium scale mining permits covering 213,602 ha, while there are total 109 large scale prospecting licenses property and eleven large scale mining licenses properties covering a total of 1,045,064 ha (GGMC).

Agriculture

Agriculture accounts for over 30 percent of the gross domestic product and employs about 30 percent of the labor force. Sugar and its by-products and rice account for most of the agricultural exports; three million metric tons of sugarcane and 225,000 metric tons of rice were produced annually in the late 1980s. Coconuts, bananas, plantains, citrus fruit, corn, and a wide variety of tropical fruits and vegetables are cultivated. Large areas of rough pasture exist in the interior savannas. Substantial numbers of cattle, pigs, sheep, and chickens are raised.

Cultivation is confined almost entirely to the narrow coastal strip of rich, alluvial soil. Agricultural expansion requires heavy expenditures for protection against flooding and for drainage and irrigation, because part of the strip is below the high-tide mark of the sea and rivers and because of the heavy seasonal rainfall. The Government of Guyana is making efforts to increase the amount of land available for cultivation through reclamation projects

Other Land Based Uses

This includes lands identified for urban and infrastructural development, such as the proposed Linden to Lethem Road Corridor. These lands are administered by the GL&SC, while gazetted roads are administered by the Ministry of Public Works.

With respect to roads, some parts of the forest are inaccessible. However, there are some roads in areas. Logging and mining concessions have contributed to the development of these roads within and around concessions.

5. Protected areas and environmental management

There are two protected areas that are governed by separate Legislations: Kaieteur National Park and Iwokrama. These cover a total land area of 434, 644 ha (1,074,002 acres). Under the Amerindian Act, the Wai Wai community of Konashen has established their community as a Community Conservation Area. The area is approximately 620,794.3 hectares. Two other areas, Shell Beach (Region 1) and the Kanuku Mountains (Region 9) have been identified as sites to be established as protected areas.

6. Summary of past efforts to address deforestation and degradation

There have been many direct and indirect efforts by the GoG to reduce deforestation and forest degradation through the various natural resources agencies as outlined in the table below:

Table Showing Efforts to Address REDD +

Efforts	Outcomes	Gaps/ Challenges	Opportunities
Implementation of the Code of Practice for Harvesting Operations that allow for good practices to be implemented in SFM and legality, including a maximum allowable cut, the harvesting of trees	The issuance, planning and management of large concession areas are executed in keeping with GFC's guidelines which themselves in many cases lend to the	Community groups require additional capacity to implement all aspects of the CoP. In some cases capacity of institutions needs to be	With compliance by forest land holders, deforestation and forest degradation at the national level will be

<p>based on proximity limitations, and compliance with the GFC's social & environmental guidelines, annual and management plan requirements, execution of forest inventory, ESIA, national log tracking system, legal verification system, strengthened field monitoring,</p>	<p>implementation of SFM and legality which allow for deforestation and degradation to be kept to a minimum</p> <p>There is managed extraction, control of gaps size openings and improvements in GFC's social and environmental guidelines. Also protection of buffer zones in forest areas. Progress in compliance with SFM.</p>	<p>strengthened (GFC, GGMC)</p> <p>New areas allocated would have to undergo capacity building and in some cases commitment of additional resources to enable these to be executed.</p> <p>Implementation of the legality assurance system needs to be advanced.</p> <p>Training in standards of legality needs to be extended in a larger way to forest communities.</p> <p>There is need for Improvement in logging practices at small and mid size operations.</p> <p>Implementation of third part monitoring (independent forest monitoring) and exploration and VPA Scheme</p>	<p>maintained at the existing low rate and can even be lowered in the future</p> <p>Initiation of IFM and FLEGT.</p>
<p>The GFC community forestry development programme capacity building sessions have been and continue to be held with communities in forest law, forest inventory & management</p>	<p>A stronger compliance with FL, FI and FM allows for sustainable use of forest resources, thereby decreasing deforestation and forest degradation</p>	<p>Communities often need additional resource support to engage in development activities that will maintain or even lower the existing rate of deforestation.</p>	<p>The national level inventory would provide an estimate of the carbon stock. It will also enable the GFC to assist Amerindian Communities and other private forest owners in developing informed management and community development plans for wider management of the forest resources.</p> <p>With compliance by small scale operators, deforestation and forest degradation at the national level will be maintained at the existing low rate and can even be lowered in the future</p>
<p>Land titling</p>	<p>96 village communities have title over their lands</p>	<p>10 villages do not yet have formal legal title</p> <p>Some villages currently exist without title because they do not yet fit the criteria for titling</p>	<p>With the implementation of REDD + and the receipt of revenues generated from REDD +, the land titling process can be sped up.</p>
<p>Effective implementation of the mining regulations</p>	<p>A stronger compliance with mining regulations allows for sustainable use of forest resources, thereby decreasing deforestation and forest degradation</p>	<p>Implementation of mining regulations needs to be strengthened at the small and medium scale operations.</p>	<p>With compliance by both large and small scale operators, deforestation and forest degradation at the national level will be maintained at the existing low rate and can even be lowered in the future.</p>
<p>Monitoring of Infrastructural development</p>	<p>Conducting of Environmental and Social Impact Assessments (ESIAs) for large infrastructural projects & preparation of Environmental Management Plans for smaller scale infrastructural projects</p> <p>Monitoring & oversight by the Ministry of Public Works &</p>	<p>Capacity support to agencies that are involved in ESIA monitoring and implementation.</p>	<p>Greater interagency coordination can allow for more effective monitoring and oversight of projects</p> <p>Capacity building and support to better understand REDD + & implications of infrastructural</p>

	Communications (MPW&C) , EPA and other sector agencies such as GL&SC, Ministry of Housing (MoH)		development on REDD + will lead to better M&E.
Efforts have been made to limit the effects of agriculture on the forest resources.	Sustainable agriculture practices both at the small and large scales have been developed and implemented among operators.	More efficient technologies needed Need for more qualified personnel. More coordinated planning across the land use sectors.	Capacity building and support to better understand REDD + & implications of agricultural development on REDD + More capacity building & support in various areas
Efforts made in the development of a National Forest Fire Strategy	Draft Strategy Developed	Implementation of activities identified in the Strategy	The formation of a national forest fire management strategy and action plan will reduce the threat of uncontrolled fires which have the potential to damage expanses of forest and increase emissions. This programme is relatively low cost to implement and has high probability to reduce unwanted fires and emissions. It is reported that the contribution of this driver to deforestation is small in Guyana, however this has not been officially recorded at a given percentage level.

The Assessment of forest sector and drivers of deforestation will be deepened in the design phase to inform the design of the REDD + Strategy.

QUICK ASSESSMENT PAPER ON DEFORESTATION AND FOREST DEGRADATION IN GUYANA

Summary

At present, a national approach to assess forest carbon stock has not been developed nor implemented in Guyana. Several aspects have however been addressed to some extent, in terms of assessing change in land cover through remote sensing imagery analyses and forest inventory assessment. Additionally, some work has begun in terms of biomass estimation in various soil types. There still however, needs to be a methodological assessment model developed to assess forest carbon stock at the national level drawing in some way, on the resources and results of these steps already initiated.

There are several policy guidelines including the National Forest Policy, which addresses key areas of forest sector development in Guyana. While there have been several identified drivers of deforestation relevant to Guyana, a quick assessment done of land change at the national level, formulated an assessment of the effect of the main drivers. Mining seems to be the single most major cause of degradation within the SFE. Approximately 24, 428 ha of forests was cleared due to mining activities and another 21, 903 ha of forests was cleared for agriculture. The most degraded forests areas are found in the North-West region of the country, which is traditionally known to have the highest concentration of mining concessions.

Several agencies work in collaboration to address natural resources issues in Guyana: Guyana Forestry Commission, Guyana Lands and Surveys Commission, Guyana Geology and Mines Commission, Ministry of Amerindian Affairs, and the Environmental Protection Agency among others.

The foreseen role of international and local donors is seen in lending both technical and financial support to activities planned at a national level. The involvement of these bodies has so far contributed greatly to the basic knowledge

and technical base available in Guyana.

Section 1

Land Use and Forest Policy

The Government of Guyana (GoG) has recognized that effective land use planning is of vital importance to the sound management of Guyana's vast natural resources. The Governments of Guyana and Germany have collaborated to produce a draft land use plan for a pilot area in Guyana through the Natural Resources Management Project. This project was comprised of four main components:

- Establishment of a national database on natural resources based on Geographic Information System (GIS) technology
- Establishing a land use planning process in a pilot area based on a participatory approach
- Supporting the GoG in providing policy guidelines and adequate legislation with regard to natural resources management and land use planning, and
- Strengthening the institutional capacity of natural resources management agencies.

A National Land Use Plan is being finalized by the GoG.

National Forest Policy

The National Forest Policy was approved by the Government in 1997. This is the first official policy statement since 1953 and was developed over a period of two years through a process that involved extensive consultation with stakeholders. The new policy responds to significant changes in Guyana's economic, social, and political environment over the last fifty years and addresses the country's national and global responsibility for the sustainable management of the forests. The policy recognizes the vital role of the forests in maintaining the earth's climate and ecosystems and that they are an increasingly important source of income and wealth for national development. On 22nd January, 2009 the Forest Bill was approved by Parliament. This Bill, among other areas, emphasizes the importance of multiple uses of forest resources.

The objectives of the National Forest Policy are to:

- Promote sustainable and efficient forest activities which utilize the broad range of forest resources and contribute to national development while allowing fair returns to local and foreign entrepreneurs and investors.
- Achieve improved sustainable forest resources yield while ensuring the conservation of ecosystems, biodiversity, and the environment.
- Ensure water protection and rehabilitation: prevent and arrest the erosion of soils and the degradation of forests, grazing lands, soil, and water; promote natural regeneration and reforestation and protect the forest against fire, pest, and other hazards.

A sub-section of the national forest policy addresses the forest industry:

- The fundamental objective shall be to develop a financially and economically viable forest industry.
- The number and types of forest based industries established shall be consistent with the capacity of the nation's forest for sustainable management.

The National Forest Plan

The National Forest Plan was produced in 2001 by the GFC after a period of consultation with stakeholders in the sector. The Plan provides a framework, and identifies programmes and activities that must be accomplished, to ensure implementation of the policy and compliance with the law. Recognizing the broad purview of modern forestry, it stated clear objectives, with associated activities, for national planning, forest resource management, forest industry, research and information, education and training and social development.

Both the National Forest Policy and the Forest Plan will undergo a process of review and revision during 2010.

Section 2- Project Overview

The GFC has in place, a Change Detection system for recording and updating roads and forest disturbances from satellite data. A series of tools have been developed that run within ArcGIS 9.2 framework that assist with the detection process and management of the workflow. The initial source of satellite data for this Assessment is 30 m resolution Landsat TM and ETM+ imagery. To acquire full coverage of Guyana required 17 Landsat scenes acquired for 2007-2008 period. The findings of the analyses of these images were supported by ground truthing.

These analyses were completed, and it found that a total of 54, 210 ha of deforestation area including 2,626 km of forest roads, were mapped. Of this total, it is estimated that approximately 34, 044 ha of deforested areas are found

within the State Forest Estate (SFE). Total State Forest Area is 13.3 million hectares while total forest cover is 18.6M million hectares. Based on this Quick Assessment, the total accumulated rate of deforestation in the SFE is 0.25 percent while the rate over Guyana forest cover is 0.29 percent.

Methodology

A decision tree has been developed to assist in determining the legality of detected forest and roading activities. Its purpose is to support decisions regarding appropriate responses by GFC to detection of changes in forest cover determined from medium resolution satellite images. At this scale, change can be categorized as linear or polygon features – equating to roads and canopy gaps (approximately 1ha or greater), respectively. The location of change is the primary determinant of whether it is likely to be illegal activity related to logging. Reference to proposed operations presented in Annual Operations Plans (AOPs) will be necessary to support a decision on the probable legality of any activity detected.

Using medium-scale imagery, change detection is possible for new forest roads and canopy clearings of around 1ha (100m x 100m) or more in extent. However, it is not possible to determine from images the purpose of such changes; i.e. whether the canopy disturbances are due to forestry activities or are related to other causes such as mining or agriculture. In cases where change is detected, decisions can be supported by using other GIS data such as active forestry concessions, mining properties and agricultural leases. The use of images for change detection can thus serve as a mechanism to alert GFC to possible forestry activities and provide a rational basis for targeted ground-truthing or tasking higher-resolution satellites.

Reference to forestry annual plans can suggest whether activities detected in the forest are occurring within approved blocks or not. Similarly, roads should have been planned and approved in annual plans and, if passing through adjacent concessions, should be subject to a Timber Path License.

Higher resolution images, where available, should allow a determination of the nature of the change (i.e. forestry, mining, agriculture, residential) as well as a more profound assessment of compliance with some of the stipulations of the Code of Practice such as:

- Road widths
- Canopy openings
- Creek pollution
- Location of camps
- Vegetation clearance around bridges
- Skid trails

Detection of Forest Disturbance

Successful detection of forest disturbance and roading activities are related to both image quality and the type and interpretation of changes.

The Landsat dataset assembled provides a broad overview of change. Overall the data should be viewed as answering the question “Where are the changes occurring?” A rule of thumb for the relation of the pixel size and the map scale is 0.05 up to 0.1mm pixel size in the map scale (meaning 30 m resolution) equals an equivalent map scale of 1: 300 000. This scale is suitable for high level detection and provides an excellent base layer for targeting and mobilising resources.

By way of example, the same natural forest area is used (Mindanao, Philippines) to show how the level of detail increases, moving from recognition⁷ where uncertainty still exists as to the boundary and cause of the land use change (as in Phase I) to identification where the boundary is more certain (Phase II dataset). From the left are examples of interpretation levels using Landsat ETM+ (30 m), 2.5 m SPOT data.

⁷ The interpretation of an object is organised in 4 hierarchical levels:

1. **Detection** is the discovery of an object without recognition. *example: there is a white linear feature in this corner of the image.*
2. **Recognition** is the ability to fix the identity of an object within a group type. *example: this green feature is a block of trees*
3. **Identification** is the ability to place the identity of an object as a precise type. *example: this block of trees has gaps*

Practical Indicators of Change

Using medium resolution data like Landsat (30 m resolution) temporal changes ≥ 1 ha should be detected if the activity is clear-cut due to forestry or mining activities. Smaller or lower intensity activities may be detected but will be difficult to confirm with certainty. In these cases local knowledge, forest inspection or higher resolution will reduce this uncertainty.

Roading activities are also possible to detect. Skid tracks are often constructed off of existing road or river networks, so it is important to maintain an accurate GIS base map of existing roads to ensure new tracks are detected.

Several spectral bands are well suited for enhancing spectral characteristics associated with roading and harvesting activities. A three band image composite comprising green, near infrared and shortwave infrared provides the best contrast. A series of examples that show road construction and the different land clearing operations identified from the Landsat satellite data follow.

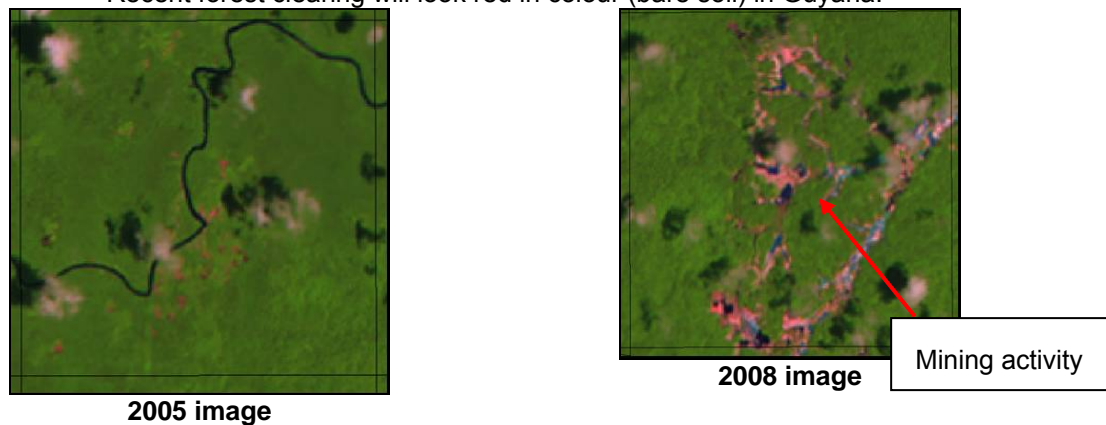
Road Detection

New road appearing between 2005 and 2008 is shown below for Guyana.



Forest Clearing

Recent forest clearing will look red in colour (bare soil) in Guyana.



Mining seems to be the single most major cause of degradation within the SFE. Approximately 24,428 ha of forests was cleared due to mining activities and another 21,903 ha of forests was cleared for agriculture.

Up to 2008, the total extension of forest roads was 2,626 km, with 2,329 km alone found within the SFE. The occurrence of roads is significant in the central and north-west regions of Guyana. About 80 percent of official forest roads are concentrated in these areas, particularly in the large concession lease areas.

Analysis of the satellite images show that while the deforestation rate of Guyana is significantly low as compared to

other countries with high forest cover, mining seems to be the most prominent cause of deforestation.

Density of deforested areas

The highest densities of deforested areas are found in the NW regions, within the large concession lease areas. The smallest densities were observed in the remote regions of Guyana. When combining the deforestation map derived from the satellite image analysis with the roads density map, it was observed that the highest rates of deforestation occur in the areas with highest densities of forest roads.

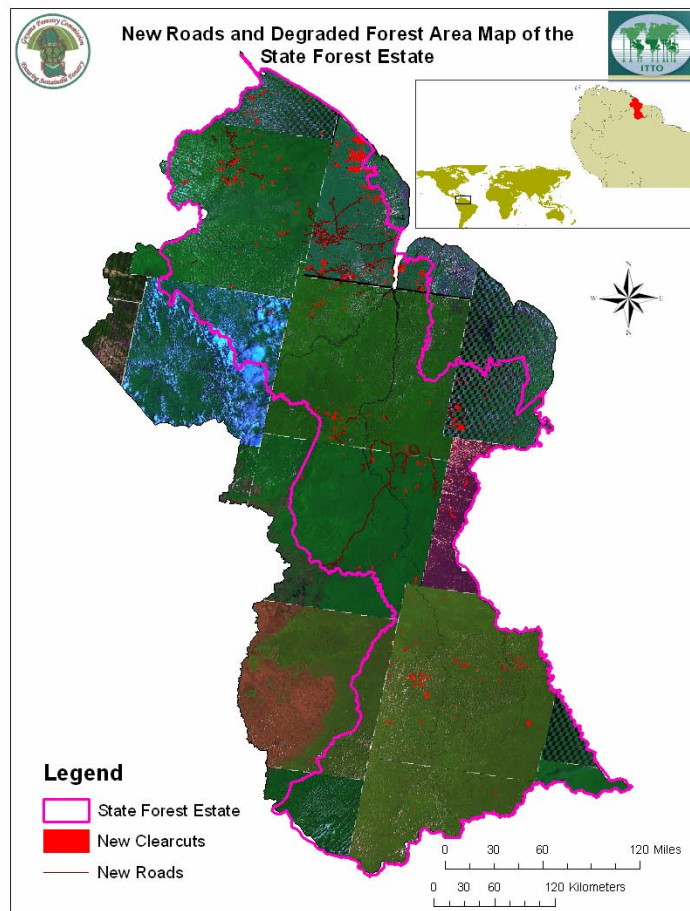
Evaluation of Donor Involvement

Support from the donor community has involved a combination of technical and financial assistance in implementing key activities, such as:

- Estimating biomass for forests in Guyana – Donor: Tropenbos, CI, WWF
- Assessing land area change through remote sensing imagery analyses – Donor: International Tropical Timber Organisation
- Ecological and financial, Sustainable Management of the Guiana Shield Eco-region – Guyana Shield Initiative Phase 2; Donors: EU, The Dutch Government, UNDP, IUCN Netherlands Committee.
- Guyana's reporting and assessment requirements under the UNCCD (including National Action Programme and Report on Implementation), addressing issues of land degradation and drivers of change – Donor: UNCCD
- Biodiversity mainstreaming through avoided deforestation – Case study on the Georgetown Lethem roadway addressing potential land cover change, impact on carbon storage and biodiversity, including scenario modeling. Donor: IDB.

The first listed project was successful in providing biomass estimates based on soil types. Additional work needs to be done at a more detailed level, incorporating reference scenario modeling and the development of a monitoring system. The other projects listed are currently in execution, from which the results will inform the work to be done under the FCPF project.

The foreseen role of international and local donor is seen both in lending technical and financial support to activities planned at a national level. The involvement of these bodies has so far contributed greatly to the basic knowledge and technical base available in Guyana.



Section 3

Governance and Legal Aspects

State forests administered by the Guyana Forestry Commission (GFC) account for about 13.3 million ha (63 percent of the land area). As of 2008, 50.1 percent of state forest had been allocated for timber harvesting. Within the State Forest Area there are some areas nationally identified for total or partial conservation activities including the Iwokrama Forest reserve/research sites.

In addition to State Forest, a portion of the national forests are under titled Amerindian lands. Additionally, there have been leases of State forests to community groups for the purposes of logging. State Forest Permissions (SFP) are also issued to Amerindian groups.

Within the commercial forestry belt, there has been significant commercial timber production on Amerindian lands which is subject to the same log-tracking system operated on State Lands. The GFC issues three main types of forest concessions for purposes of harvesting:

- *State Forest Permissions (SFP)*: granted on an two yearly basis for areas under 8,097 hectares of State forests; there is the option for its renewal after the two year lease period;
- *Wood Cutting Lease (WCL)*: granted for periods of three to ten years for areas between 8,097 and 24,291 hectares; a forest management plan is required, and there is the option for the renewal of the concession;
- *Timber Sales Agreement (TSA)*: issued for periods of twenty-five or thirty years for areas exceeding 24,291 hectares; a forest management plan is required, and there is the option for renewal of the concession.

One of the challenges that will have to be addressed in terms of land use is the greater implementation of sustainable forest management techniques and effective land use planning in Amerindian communities. In designing and implementing a REDD + Scheme, emphasis will be placed in capacity building in Amerindian communities.

Land Use Policy

Land use planning is being approached at both the national and regional levels. These will seek to address the multiple uses of resources. To date, the following Plans have been developed:

1. Region 6 East Berbice Land Use Plan.
2. Linden Lethem Road Corridor Land Use Plan (Draft)
3. The Region 9 Sub Region Land Use Plan (Draft)

Institutional Responsibilities

The Guyana Forestry Commission is responsible for regulating forestry activities within the State Forest Estate. Among its areas of responsibilities are: forest monitoring, forest inventory, forest law enforcement and governance, forestry management and policy, and forest conservation. Additionally, the GFC also has a cross sectoral function to work with other natural resources agencies in executing the natural resources mandate in other areas of work. The Guyana Lands and Surveys Commission has a national mandate to administer public lands in an effective and efficient manner.

The Environmental Protection Agency has a broad mandate on environmental management issues, including the approval of Environmental Management Plans and Environmental Impact Assessments (EIAs) for forest concession holders.

Mining is controlled by Guyana Geology and Mines Commission. This includes small, medium and large scale mining.

Formal training and education is provided by the University of Guyana for degree and diploma studies and by the Guyana School of Agriculture for certificate studies. The Forestry Training Centre Inc provides training in Reduced Impact Logging (RIL) for all stakeholders. These programmes have all been revised recently and are run in close collaboration with GFC.

The Ministry of Amerindian Affairs is a key agency in addressing land titling issues for Amerindian communities.

Institutional Framework – the Forest Sector

The GFC was established in 1979 as a semi-autonomous Government organization which is governed by an independent board of directors comprising at any one time of not less than nine, but not more than 13 persons who are responsible for overseeing the management of the organization.

The President is the Minister responsible for forestry and has delegated this responsibility to the Minister of Agriculture though key decisions regarding forestry are taken by the Minister to the President and Cabinet.

There is a sub-committee of the Cabinet on Natural Resources and Environment which GFC is a member of, This body comprises policy and technical representatives, provides guidance and technical review and support to Cabinet. The work of this sub-committee is supported by the Natural Resources and Environment Advisory Committee (NREAC) which is chaired by the Prime Minister and coordinated by the Adviser to the President on Sustainable Development. This technical committee comprises representation of key Government entities and provides technical review, coordination and guidance. GFC is a key member of NREAC. Natural resources issues, e.g. mining, forestry and agriculture are discussed and solutions are developed at this level.

At the operational level, GFC works in close collaboration with the REDD Secretariat and the Forest Product Development and Marketing Council (FPDMC) and the Forestry Training Centre Inc (FTCI). The Minister of Agriculture has established a Technical Committee comprising GFC and the Forest Producers Association (FPA) and a Ministerial Committee comprising the GFC, FPA and Guyana Manufacturing & Services Association (GMSA) as part of efforts to foster a closer working relationship and coordination with the forestry private sector and industry stakeholders. These fora provide a mechanism through which the GFC can have an open dialogue and problem solving mechanism to address issues relating to natural resources management; especially in areas of harvesting, forest industry, export regulations, etc.

Identification of Gaps

To date, a national approach to assess forest carbon stock has not been developed nor implemented in Guyana. Several aspects have however been addressed to some extent, in terms of assessing change in land cover through remote sensing imagery analyses and forest inventory assessment. Additionally, some work has begun in terms of biomass estimation in various soil types. There still however, needs to be a methodological assessment model developed to assess forest carbon stock at the national level, drawing in some way on the resources and results of these steps already initiated. This important step to executing a methodology for forest carbon stock assessment will provide the impetus to Guyana's efforts towards maintaining its standing forests not only as a means of a direct mitigation intervention to reduce carbon emissions, but also within the context of opportunity costs, and the integral

link to sustainable development and livelihoods for local communities and Amerindian populations, within the wider context of achieving Millennium Development Goals targets and poverty alleviation. Additionally, this initiative will provide useful and practical examples through forest management unit/concession, new protected areas, forest concessions and indigenous/community territories on how demonstration activities can be linked to national-level accounting and carbon registry tracking.

The formulation and implementation of a national system to monitor emissions and emission reductions would be the basis for performance payments. Independent third party verification of this monitoring is critical. This process would entail training staff of the Guyana Forestry Commission (GFC) and other relevant agencies, and the capturing of forest data for assessment (of forest carbon stock) purposes, as well as processing and analysis of this data. Data from remote sensing, forest inventories etc. would also be incorporated in this analysis.

The Government of Guyana intends to maximize the benefits that can accrue from its natural resources to support its national development. Specifically, if the Strategy to reduce long term GHG emissions attracts incentives to cover forest management costs, carbon transaction costs, and community opportunity costs, then the residual funding can be utilized for renewable energy and other low carbon economic development. Such strategies are expected to serve in the overall development of key cross-cutting sectors of the country.

The application of a robust system of monitoring, planning and strategy development, necessary for marketing and receiving investments for ecosystem services will assist in streamlining forest governance processes through application of sound verifiable and rigorous principles, ensuring that good environmental practice already enshrined in the Guyana laws, are integrated into development.

The main policy gaps are: revising of the National Forest Policy, National Forest Plan, and to continue work on finalizing the National Land Use Plan.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3
Updating & finalization of Quick Assessment Report			
Revising National Forest Policy and Plan			

Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Finalize Assessment of Land Use, Policy and Governance	Updating & finalization of Quick Assessment Report	25,000				25,000
Update existing Policy Framework	Revising National Forest Policy and Plan	30,000	30,000			60,000
Total		55,000	30,000			85,000

Government	25,000	30,000			55,000
FCPF	30,000				30,000
UN-REDD Programme (if applicable)					
Other Development Partner 1 (name)					
Other Development Partner 2 (name)					
Other Development Partner 3 (name)					

2b. REDD + Strategy Options

Objectives of the REDD + Strategy:

The objective of Guyana's REDD + strategy is to reduce deforestation and forest degradation in Guyana by implementing related policy, procedures and legislation as well as by robust monitoring and enforcement. The strategy will undertake an approach that is participatory, inclusive and will integrate all levels of stakeholders, to ultimately promote sustainable development in Guyana. The development of the REDD + Strategy will be informed by a number of studies, consultations, study tours, demonstration projects and community programmes, in areas such as sustainable forest management, reduced impact from mining and infrastructure, and equitable benefits sharing.

The strategy will encompass a range of policies and programmes aimed at reducing the level of forest carbon emissions (compared to the reference scenario) while promoting local development and social inclusion. It may include enhanced procedures, monitoring and enforcement, public participation mechanisms, as well as awareness and dissemination programmes, and the use of incentive instruments (e.g. certification). The REDD+ strategy will address the causes of deforestation identified in chapter 1 (existing and potential), including drivers in the mining, infrastructure, agriculture and forest sectors. The REDD+ strategy will also address fundamental conditions for success, including land tenure security and the design of an equitable benefit sharing mechanism. The strategy will consider the opportunity costs of REDD +, including the potential foregoing of revenues from carbon-emitting activities (in conjunction with the definition of the reference scenario), the cost of replacing livelihoods and/or the development of alternative sources of income. The design of the REDD+ strategy will follow a multi-stakeholder participatory process and will allow for the promotion of alternative sustainable poverty reduction development programmes that are pro-poor and inclusive.

REDD + Strategy

The activities for the REDD+ Strategy will be one of the outputs of the R-PP. The outline of a few likely potential activities have been considered, which can be a starting point for discussions. It is important to note that the activities listed below are in no way exhaustive, and as the relevant studies are conducted, more activities may be considered. It is expected that Guyana's REDD+ Strategy will consider some of the following activities.

Potential REDD+ Candidate Activities

- a) Utilization of non-timber forest products and services and expanding multiple uses of the forest (goods and services), including exploring the generation of environmental services benefits, to promote alternative sources of economic activities and income generation while reducing the pressure on forests
- b) Reducing impact of logging and promoting added value processing to reduce waste (produce more value while using less standing carbon)
- c) Exploring options of forest certification/ legal verification/third-party monitoring of logging operations
- d) Reforestation of forest gaps as well as exploration of plantation activities as well as engaging communities in forest rehabilitation activities including enrichment planting
- e) Enhance the enforcement of compliance by miners and mining companies with GGMC & EPA's requirement of reforestation on closure of mined out areas as well as stronger compliance by and improved capacity of miners to implement mining regulations.
- f) Sustainable Agroforestry & Community agroforestry initiatives
- g) Development of the practice of SESA and mitigation plans for future infrastructural development
- h) Benefits sharing and monitoring of poverty alleviation outcomes
- i) Consolidation / strengthening of land and user rights

The method to develop Candidate Activities will be by studies, consultations, learning events, and pilot/demonstration projects.

Demonstration/Pilot Initiatives

In the course of the preparation phase, the candidate activities will be discussed by stakeholders through extensive consultations as part of the consultation plan described in Component 1b and coordinated by the NRWG. Those that appear to be relevant, appropriate and feasible will be piloted as small scale projects in the fields. These will be accompanied by relevant studies, study tours and workshops to ensure that they provide the appropriate lessons learnt.

The process that will be used to determine candidate activities will emphasize: community outreach, and consultations on climate change, carbon project design and REDD + incentives; study tours with other counties to exchange experiences on potential field demonstration projects; the establishment of clear criteria for evaluation and selection of pilot projects.

Relevant pilot activities will be done in collaboration with local partners that have experience within these areas so as to build synergies. Some of the key pilot/learning activities would be: (i) reducing impact of logging; (ii) reducing impact of mining; (iii) independent forest monitoring. The methodology will emphasize the definition and implementation of forest/carbon and socio-economic monitoring plans and methodology; as well as the analysis and testing of alternatives that address each deforestation and degradation driver.

Preparation Activities

Activities focused on building technical capacity in areas of application of required methodologies and measurements will also need to be conducted. These include, assessment of historical emissions from deforestation & degradation, projection and modeling of future emissions, develop methodology, monitoring plan and protocol to update biomass field estimates, create a national-level carbon methodology that includes project-level activities, and establish a capacity building plan for biomass monitoring activities as well as for GIS and remote sensing activities.

Existing Gaps

These activities will be conducted to fill the gaps that currently exist. Within Technical Strengthening, there is currently a lack of:

- historical baseline
- projection of future emissions
- assessment of deforestation & degradation
- biomass monitoring plots
- capacity building plan for biomass monitoring, GIS/Remote Sensing
- national methodology for forest carbon stock assessment

Within Demonstration Initiatives there currently exists a lack of:

- structure for implementation of pilot activities
- criteria for evaluation of pilot projects
- capacity building plan for field teams to implement pilots
- socio-economic monitoring plans & methodology

Trade- offs analysis

A trade off analysis will be conducted to inform the design of the REDD + strategy. It will include:

- a. Conducting an evaluation of existing economic activities at the community level;
- b. Thorough consultations, workshops with communities, assessing the current economic and social benefits including livelihood and welfare support that existing economic activities provide;
- c. Identifying spin off benefits and costs that existing economic activities provide to local populations and nearby communities;
- d. Assessing and quantifying the impacts on the environment/ forest carbon of current economic activities;
- e. Identifying, through stakeholder consultation, suitable alternative economic opportunities that can be undertaken;
- f. Assessing and quantifying the benefits and impacts (including costs) of such activities on the economic and social livelihoods and the environment;
- g. From the proposed alternative economic opportunities, identifying suitable activities to be undertaken in keeping with the expressed needs of stakeholders;
- h. Assessing the economics of the major land uses causing deforestation & forest degradation.

The NRWG, as well as the GFC/RS will be the mechanism through which the trade offs analysis will be executed. All assessments will be done considering and including in all aspects of the analysis, the sustainable development of communities.

Alternative Economic Activities

At this initial stage, the development of a system to address discussions on and implementation of Alternative Economic Opportunities (AEO) has been identified as one of the REDD Strategies that will be considered. The RPP does not seek to predetermine what these should be and does not seek to preempt what communities may want as AEO. Instead, what it seeks to do is to identify that indigenous groups will be involved in discussions in implementation of AEO and an outline of **potential** REDD candidate activities. It is expected that through the involvement of Amerindian groups and communities in this process, in partnership with national stakeholders that clear identification of feasible AEO, i.e. which would not include unsustainable activities will be identified.

Expected Outcome

The expected outcome of this component is a set of REDD + policies and programmes including a benefits sharing system, that have been informed by stakeholders based on pilot studies and tours and international experience. These activities must show the potential to reduce emissions as well as be replicable, monitorable, cost efficient and be the basis for Guyana’s low carbon economy.. Potential loss of local income must be compensated, and this cost must be factored in the economic analysis of trade-offs. It will also substantially improve standards and add value, encourage non-timber forest activities, lead to higher employment, sustained and improved indigenous livelihoods, and economic growth.

Potential REDD + Activities

Drivers of Deforestation	Strategies and Potential Action	Risks	Mitigation Measures
Limited utilization of NTFPs & Environmental services	Utilization of non-timber forest products and services and expanding multiple uses of the forest (good and services), including exploring the generation of environmental services benefits, to promote alternative sources of economic activities and income generation while reducing the pressure on forests	Over-extraction of NTFP if unregulated. Lack of knowledge and previous experience in Environmental Services utilization and PES may lead to challenges in targeting benefits and managing such facilities.	Finalizing of a Code of Practice for major NTFP and integrate the monitoring of NTFP extraction in a greater way into GFC forest monitoring and resources planning and management functions. A comprehensive and participatory programme will enable active involvement of stakeholders thereby facilitating knowledge sharing and experience/capacity building in the areas.
Reduce carbon emissions from logging- Full potential of added value forest activities not realized	Reducing impact of logging and promoting added value processing to reduce waste (produce more value while using less standing carbon)	An increase in added value activity may not necessarily decrease the pressure on the forest as growth in demand for added value products may result in equal or greater levels of extraction.	Strict quota regulation and monitoring of extraction of forest produce despite end use application. Advise communities on options to add value
Forestry - Forest gaps created in some cases following natural resources utilization as well as decrease in forest stocking in some cases	Reforestation of forest gaps as well as exploration of plantation activities as well as engaging communities in forest rehabilitation activities including and enrichment planting Exploring options of forest certification/ legal verification/third-party monitoring of logging operations	The introduction of invasive species.	Strict forest resources management and monitoring of species introduced.
Mining - Limited resource availability and capacity in GGMC& EPA	Enhance the enforcement of compliance by miners and mining companies with GGMC & EPA requirement of reforestation on closure of mined out areas as well as stronger compliance by and improved capacity of miners of mining regulations	Possible prohibitive cost of reforestation may discourage potential investors. Production may be decrease which may impact on employment and income generation.	The Government can provide technical guidance and support in reforestation activities. Allowing for effective sustainable environmental planning at the initial stages so that any cost or production implication and be provided for at the outset.

Agriculture - Agriculture activities leading to forest land clearing.	Management of forest areas to be cleared by agriculture, strengthened.		Close collaboration and planning with the Ministry of Agriculture, Ministry of Amerindian Affairs and the key natural resources agencies, along with the EPA.
Alternative income-generating activities - Poverty & sustainable forestry not generating enough income to be an incentive to preserving forests	Agroforestry & Community agroforestry initiatives	Communities may not sustain these activities in the long term	Support and capacity building for community members to develop and maintain the respective AEOs selected
Infrastructure- Road, Agricultural, Urban & Infrastructural Development	Development of the practice of SESA and mitigation plans for future infrastructural development. Improved land use planning & coordination amongst agencies	Development activities may lead to conflicts in land uses in some areas	Closer collaboration amongst RS, GFC, GL&SC, MoA, MoPW&C, MoH, GGMC
Benefits sharing- Lack of benefits sharing systems for REDD + practices	Benefits sharing and monitoring of poverty alleviation outcomes	Local communities may lack the capacity to properly manage direct flows of income	Support and capacity building for community members
Land- Lack of security on land tenure, user rights are disincentives to land & user rights	Consolidation / strengthening of land and user rights	Creation of an imbalance between titled and untitled Amerindian communities	Closer collaboration of RS with MoAA. Advancing the land titling process.

** Note that all activities will be continuous to ensure that their implementation is sustained*

Guyana's REDD + Strategy will not be limited to the above outline but will include continuous monitoring, other strategies as well as consultations.

In the course of the preparation phase, the candidate activities will be discussed with stakeholders and those deemed relevant will be piloted on a small scale. These pilots will be accompanied with relevant studies, study tours and workshops to provide necessary training and experience.

Who will lead and coordinate the design and organization of the REDD +-Strategy

The Guyana Forestry Commission, the REDD Secretariat, in consultation and cooperation with other Government and non-Governmental stakeholders.

How the REDD + strategy will be developed, what elements will be analyzed and what stakeholders will be involved

Activities relating to baseline development and monitoring are discussed in further detail in Component 4. These have already commenced, and will progress, subject to resources, over the first year of the project. Annex 3 (a-d) details Terms of Reference relative to these. Other activities will be scheduled as per the table below, to lead to completion of the REDD + strategy within a 3 year period. Studies will include verifiability and independent monitoring, economic analysis of alternative land uses and drivers of deforestation.

Stakeholder liaison and workshops with other government institutions is already ongoing and will develop further as the strategy unfolds. The demonstration initiatives provided for in the strategy will provide a concrete context for engagement with other stakeholders such as timber companies, mining operators, conservation and other NGOs, Amerindian community groups, as well as informing and updating the general public through the media and GFC website.

REDD + will be incorporated into the overall development of the country through the following ways:

1. into the national forest policy via the GFC which is the forest policy coordinating body of Guyana
2. into the LCDS which serves to transform Guyana's economy whilst combating climate change.
3. into national climate policy via the OCC, OP which is the principal climate policy coordinating body of Guyana
4. In keeping with one of the main goals of Guyana's Poverty Reduction Strategy (PRSP)- (i) sustained economic expansion within the context of a deepening participatory democracy

REDD + will be incorporated into both the national climate change agenda as well as the national forest policies to ensure that there is a holistic approach to its implementation, rather than a fragmented one. This will be accomplished through collaboration and coordination by all parties involved.

It should be noted that policy and governance issues have been identified as an important part of the REDD + agenda for Guyana. The REDD+ Governance Development Plan (RGDP) is being developed which includes an aspect on land use planning, and finalizing such a plan for Guyana.

Summary

The objective of Guyana’s REDD + strategy is to reduce deforestation and forest degradation in Guyana by implementing related policy, procedures and legislation as well as monitoring and enforcement. The strategy will undertake an approach that is participatory, inclusive and integrates all levels of stakeholders, and will pursue the sustainable development of Guyana. The development of the REDD + Strategy will be informed by a number of studies, consultations, study tours, demonstration projects and community programmes, in areas such as sustainable forest management, reduced impact from mining and infrastructure, and equitable benefits sharing.

Guyana’s REDD + strategy will encompass a range of policies and programmes aimed at reducing the level of forest carbon emissions (compared to the reference scenario) while promoting local development and social inclusion. The REDD + strategy may include enhanced policies, procedures, monitoring and enforcement, public participation mechanisms, as well as awareness and dissemination programmes, and the use of incentive instruments. The strategy will address the causes of deforestation identified in chapter 1 (existing and potential), including in the mining, infrastructure, and agriculture and forest sectors. The REDD + strategy will also address fundamental conditions for success, including land tenure security and the design of an equitable benefit sharing mechanism. The strategy will consider the opportunity costs of REDD +, including the potential foregoing of revenues from carbon-emitting activities (in conjunction with the definition of the reference scenario), the cost of replacing livelihoods and/or the development of alternative sources of income. The design of the REDD + strategies will follow a multi-stakeholder participatory process.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3	Year 4
Identify REDD + Candidate Activities				
Conduct specific studies, workshops and study tours, including trade off analysis.				
Attain overall feedback from consultations in the context of the Consultation Plan.				
Design and Evaluate Pilot or demonstration Projects				

Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Design REDD + Strategy Options	Identify REDD + Candidate Activities	20,000	30,000			50,000
	Design and Evaluate Pilot or demonstration Projects			150,000	150,000	300,000
Examine REDD + Strategy	Conduct specific studies, workshops and study	40,000	50,000	40,000		130,000

Options	tours, including trade off analysis.					
Consult on REDD + Strategy Options	Attain overall feedback from consultations in the context of the Consultation Plan.		30,000	30,000		60,000
Total		60,000	110,000	220,000	150,000	540,000
Government		20,000	20,000	30,000	20,000	90,000
FCPF		40,000	90,000	190,000	130,000	450,000
UN-REDD Programme (if applicable)						
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

2c. REDD + Implementation Framework

Objectives of this component

The general objective of this component is to develop the institutional framework that will coordinate the REDD + programmes and ensure multi-stakeholder participation during the implementation phase. The design of the REDD + implementation framework will be characterized by inclusiveness and participation, starting from the coordination and participation mechanisms that are being put in place for the readiness preparation phase, and building upon experiences as the process progresses. This is expected to be an iterative process of adjustment and refinement in which the multi-stakeholder NRWG will play a key role.

Expected Outcome

The expected outcome is that REDD+-based and forest carbon valuations will be incorporated into land use policies and decisions, and development and investment project impact assessments across all sectors, with the necessary institutional mechanisms created or adapted to enable and ensure this process.

4.1 International Conventions

The national REDD + Strategy and Methodology to be implemented will be done in keeping with the goals of the United Nations Framework Convention on Climate Change (UNFCCC); the IPCC Guidelines for National Greenhouse Gas Inventories as well as the United Nations Declaration on the Rights of Indigenous Peoples (UN DRIP). The Declaration emphasizes the rights of Amerindian to maintain and strengthen their own institutions, cultures and traditions and to pursue their development in keeping with their own needs and aspirations. It also prohibits discrimination against Amerindian and promotes their full and effective participation in all matters that concern them, and their right to remain distinct and to pursue their own visions of economic and social development. Consequently the principle of free, prior and informed consent will guide the process. Lessons will be drawn from project initiatives that are coordinated through relevant international discussions at ITTO, UNFCCC, CBD and other fora.

4.2 The legal and regulatory framework

REDD + & Future Forest Activities

With the implementation of REDD + activities, it is expected that sustainable mining, forestry and agricultural activities will be allowed to continue in accordance with existing laws and guidelines which govern their practices. Revisions may have to be done to existing policies and procedures where these are required to further enhance sustainable management. There will be continued and increased stringent monitoring and enforcement of compliance of the operators by the respective regulatory bodies.

Projects that are currently going through the permitting (as in the case of existing forest concessions and mining leases) process will continue. However, they must adhere to national requirements under current laws and environmental management procedures and practices.

With regards to hunting, gathering and other subsistence level activities⁸ by Indigenous peoples and other forest dependent groups, these will be unaffected. This is already allowed for under the current legislative structure which provides for continued utilization of forestry resources for subsistence use by indigenous communities.

The REDD + programme will be an integral part of Guyana's Low-Carbon Development Strategy. Under this, the R-PP will allow for an effective mechanism to be developed and implemented to monitor, report and verify forest carbon stock under a forest carbon financing mechanism which is being proposed under the LCDS. It is, in a sense, the operational mechanism that will allow for forest cover and carbon change and financial incentives to be monitored, reported and verified and will result in a transparency and fiduciary oversight to be provided to the model of incentives payments as provided for under the LCDS. Once these payments are provided, Guyana can protect its forest and simultaneously seek a development path that

⁸ Subsistence level activities refer to those that are non-commercial in nature.

maximizes the growth of low-carbon economic sectors and minimizes deforestation and high-carbon economic activity.

This would lead to action in three areas that are essential to Guyana's future: (a) Investing in low-carbon economic infrastructure; (b) Facilitating investment and employment in low-carbon economic sectors; (c) Generally enhancing the nation's human capital and creating new opportunities for forest-dependent and other indigenous communities.

Various natural resources are governed by separate legislation. Whilst these pieces of legislation effectively address the respective natural resource use, in some cases there is need for greater cohesion in implementation to allow for integrated natural resource usage.

4.3 Multi-stakeholder Participation

Engaging Stakeholders

Full participation in REDD + activities by the local population will necessitate a significant commitment of time and resources both from the national and community perspectives.

The R-PP takes cognizance of these requirements and will implement a strategy that allows for a balanced approach to all components of the R-PP implementation, including capacity building exercises. In this way, capacity building activities at the local level will be coordinated and structured to accommodate this challenge.

The approach taken in R-PP implementation will be one whereby communities will be given a choice on whether or not, and when they get engaged in readiness activities. The Proposal recognizes that various communities will be at various levels of readiness.

Indigenous people and forest dwellers have an important and direct role to play in ensuring their benefits are secured. They will also continue to be exposed to various aspects of sustainable forest management and other uses of the forest that will be REDD + friendly. They will also part take in:

- Discussions so as to ensure equity in the distribution of REDD + benefits, secure land rights and promote REDD + as a positive contributor to poverty alleviation as well as the design of alternative economic opportunities.
- Design, decisions, implementation and monitoring of REDD + strategies at the national level and in the field
- Providing local knowledge of the forest and its past uses.
- Training and capacity building in areas relevant to REDD + including Forest Policy and others
- Field based technical work, data collection & monitoring
- Information sharing & Dissemination

The GFC/RS considers forest dependent groups as integral in the collection of data as well as in selection of areas suitable for the development of National Biomass Monitoring Plots (NBMP)

Government Institutions Involved

The partner organizations involved are the Guyana Forestry Commission (GFC) as the lead agency in REDD + coordination, the REDD Secretariat, statutory bodies involved in land use planning matters including the Environmental Protection Agency (EPA), Ministry of Agriculture (MoA), Guyana Lands and Surveys Commission (GLSC), Ministry of Local Government and Regional Development (MLGRD), Ministry of Amerindian Affairs (MoAA), Guyana Geology and Mines Commission (GGMC), and the Guyana Energy Agency (GEA). The Ministry of Finance and Bureau of Statistics will assist in the incorporation of carbon valuations into the national accounts and into published statistical data.

Nationally Recognized REDD + Bodies

The recognized REDD + bodies will be the Guyana Forestry Commission, the NRWG, and the REDD Secretariat, working in collaboration with the National Climate Committee and under the oversight of the Officer of Climate Change, Office of the President.

System for in Government coordination

For Consultation & Outreach, mechanisms proposed in component 1a & b will apply – through the NRWG. For other components, including the MRVS, REDD + Strategy and Reference Scenario, the GFC and RS and its partners identified in Component 1a, will execute coordination through the NCC and under the oversight of the Office of Climate Change, Office of the President.

Systems for Engaging NGOs

NGOs will be engaged through the work of the NRWG. This is discussed in Section 1a. The NRWG will be the interface between the various communities nationally and the government. Further, through the REDD + Consultation and Outreach Committee; there will be representation by NGOs.

4.4 Other key considerations of the REDD + implementation framework

The following elements listed below are other key areas for consideration under the REDD + implementation framework:

- **Pursue efforts to address land tenure through** collaboration with Government agencies and communities, working together to address relevant aspects of land tenure arrangements.
- **Address the drivers of deforestation-** through review of policy and guidelines regarding forestry & mining, the intention of this activity is to comprehensively assess the requirements for compliance with existing, and if necessary, new and revised guidelines. Defining of deforestation and forest degradation for Guyana, will be done in the MRVS process.
- **Review and address relevant aspects of carbon ownership-** This review and clarification of carbon ownership will be conducted across different land tenure and management options.
- **Design benefit-sharing mechanism-** This will be closely linked to the work that is being done under the LCDS. The Benefits sharing system will be dependent, amongst other factors, upon the following:
 - a)The fluctuating price of carbon.
 - b)Carbon stocks within various forest types- some forests types store more carbon than others. Studies will have to be done to determine the carbon stocks.
 - c)The amount of carbon emissions avoided due to alternative land uses must be determined.
 - d)The need to meet beneficiaries directly
 - e)The need to improve livelihoods sustainably
 - f) Development of a system that is transparent and accountable
 - g)Development of a system that promotes equitable distribution of benefits
 - h)A system that respects traditional social structures and reaches vulnerable groups.

This System will be designed as part of the readiness preparation process. It proposes to do this through a consultation and participatory process and will link closely with the work that is being done under the LCDS so as not to have parallel or repetitive activities. .

4.5 Support from Development Partners

Collaboration with Development Partners

In order for Guyana to attain readiness there must be collaboration with local and international organizations and agencies. These bodies will provide the technical expertise and funding that is essential to helping Guyana build the capacity needed to implement REDD + strategies successfully.

The Government of Guyana is working through other donors through specific project related and bilateral donors to acquire other funding for the R-PP implementation. At present the GoG is working with the Norwegian Government through a bilateral agreement to garner financial support. This support will assist in the setting up of a MRVS as laid out in the R-PP.

Several donors and international partners have expressed an interest in supporting Guyana's REDD + preparation and related activities ,including the World Bank, World Wildlife Fund (WWF), United Nations Development Programme (UNDP), Inter-America Development Bank (IDB), the German Development Bank (KfW) and Conservation International (CI). Other institutions such as the FAO, IDB, the German

Government, USA and the ITTO may be approached for possible technical assistance. Efforts are also underway to secure assistance from funds under Guyana's UNFCCC GEF-4 RAF.

Additionally, through the World Bank Country Assistance Strategy (CAS) for 2009-2012, the forest sector has been identified as one target area to benefit from an international development assistance (IDA) support. This is considering capacity for a Forest, Communities & Climate Change project that would strengthen the institutional capacity and support alternative economic opportunities while reducing the pressure on forest resources.

Together with these initiatives, the GFC has submitted a proposal to the ITTO Thematic Programme on REDDES (REDD & Enhancing Environmental Services in tropical forests) to secure finances to support forest resources assessment at the national and community levels, to better enable planning and management of deforestation and forest degradation. Under this project, work will also commence identification and quantification of ecosystem services.

The GoG will continue to identify and target other donor possibilities to further support the R-PP implementation, which may include WWF, GEF, UNDP, FAO, FIP, IDB, CI, KfW etc, along with seeking technical support from agencies such as Clinton Climate Initiative, ESRI & McKinsey and Company. This assistance may be in the form of technical inputs to carry out forest monitoring and planning work involving remote sensing analyses and technical strengthening particularly for the REDD Secretariat and the GFC, to execute and manage the REDD + programme.

Outputs and lessons learnt from existing and previous donor support programmes were considered in the compilation of the R-PP and has influenced the identification of REDD + strategies and approaches, as one example, through the outputs of the US supported Guyana Trade & Investment Programme the targeted REDD + strategy of increasing added value activity was informed.

Further the outputs of the Agriculture Diversification Programme has largely informed the targeted agroforestry initiative identified under the REDD + strategy initiative. Additionally, the existing WWF supported programme with the GGMC targeted at capacity enhancement has informed the identification of the REDD + strategies that address capacity building in the mining sector to facilitate greater enforcement.

Summary of Agencies Responsible for REDD + Implementation Framework

Activity	Responsible Agencies	Supporting Agencies	Legal Mandate of Responsible Agencies
Establish and develop a communication link with other countries (as appropriate) to enable the sharing of ideas and lessons learnt		Ministry of Foreign Affairs, FCPF & relevant NGOs	GFC- forest regulation & management RS- coordination of REDD + activities Ministry of Foreign Affairs- to promote the interests of Guyana within the international community
Collaborate with government agencies working to address land tenure arrangements		MoA, GGMC, MoAA, Ministry of Housing & Water	GFC & RS GL&SC- Ensure that management of State and government lands is in accordance with legislation and Government policy;
Strengthening the GFC and other agencies including the National Climate Committee and Office of Climate Change		GL&SC, GGMC, EPA and relevant NGOs (CI, WWF, Iwokrama)	GFC- forest regulation & management RS- coordination of REDD + activities
Review and address relevant aspects of carbon ownership across different tenure and management options	GFC/RS & Office of Climate Change (OP)	MoAA, GGMC, MoA, GL&SC and relevant NGOs	GFC & RS Office of Climate Change (OP)- responsible for overseeing the formulation & implementation of the climate change agenda for Guyana, including the Low Carbon Development Strategy
Implementation of national and project-based carbon accounting and registry capabilities		GGMC, GL&SC, MoAA, MOA and community stakeholders & relevant NGOs	GFC,RS
Creation of transparent benefits sharing arrangements for targeted financial incentives for REDD +	GFC/RS & Office of Climate Change (OP)	MoAA, Ministry of Finance & community stakeholders	GFC & RS Office of Climate Change (OP)- responsible for overseeing the formulation & implementation of the climate change agenda for Guyana, including the Low Carbon Development Strategy
Develop and implement capacity building plan for government agencies on issues related to climate change and forest	GFC/RS, Office of Climate Change (OP) (OP)	GL&SC, GGMC, EPA, WWF, CI, Iwokrama	GFC & RS Office of Climate Change, OP- responsible for overseeing the

carbon			formulation & implementation of the climate change agenda for Guyana, including the Low Carbon Development Strategy
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Investment and Capacity Building Requirements

The assessment of investments and capacity building requirements will be done as part of the readiness phase. It is recognized that more investment and capacity building will be necessary to enable Guyana to gain the maximum benefit from any post-Kyoto REDD scheme. Guyana will seek to learn from, and share experiences with other countries that are preparing for this initiative and will work closely with local and international organizations to facilitate the smooth and successful transition to a state of 'readiness'. Guyana has already participated on one such forum that included Argentina, Bolivia, Suriname, El Salvador, and Colombia, which was organized by the WB and was aimed at discussing/sharing of experiences of being part of the FCPF process.

Objectives:

This component aims to:

- Assess current capacity in GFC, EPA, other government agencies' and relevant authorities', and stakeholders' and communities' (including Amerindian villages and communities).
- Identify capacity building activities that will enable Guyana to implement its REDD + Strategy.
- Estimate the financial resources required to carry out capacity building, training and development of institutional capabilities.
- Identify potential sources of funding and organizations/institutions that will be able to provide the technical assistance necessary to help Guyana in her efforts to implement REDD + strategies.
- Develop a timeline for the implementation of these activities to ensure Guyana achieves 'readiness' by 2012.

Expected Outcome:

Guyana will work with relevant agencies, stakeholders and other partners to ensure that within three years, the basic capacities and institutional capabilities to implement REDD + strategies will be developed. Capacity building will be a long term, continued effort that is not expected to be completed within the next three years. Preparation plans will aim to create basic capacity needed to:

1. Coordinate REDD + efforts in the country, including effective consultations with communities and the development of a benefits sharing system
2. Monitor GHG emissions compared with the reference baseline.

Within the next three years, Guyana would have in place a readiness package that outlines necessary capacity required to engage in a REDD + compensation system. To this end, Guyana expects to:

- Develop the institutional capacity of government agencies so that they are sufficiently able to implement REDD + strategies. A necessary outcome is for the REDD Secretariat and the GFC, to have the tools and capacities required to monitor deforestation, forest degradation and assess carbon stocks on a continual basis. It is expected that this will be done over the next three (3) years, during the execution of the R-PP.
- Establish a MRVS for the tracking of GHG emissions and carbon stock changes from land use and management on a continuous basis.
- Form partnerships with local and international organizations, communities and other stakeholders for the ongoing provision of technical assistance and training to enable local agencies/authorities to implement REDD + strategies effectively
- Execute capacity building programmes to help forest dwellers including Amerindians engage in sustainable; forest management and other natural resources utilization activities

Activities

A number of activities will be conducted over the next three years of Readiness Preparation, including:

- Conduct Investment assessment and develop capacity building plan for national and community level needs to engage in REDD + activities.
- The promotion, training and education on the interpretation and implementation of natural resources legislation, policy and guidelines.
- Effective monitoring of State Forests is essential to inhibit illegal activities and unsustainable practices that contribute to deforestation. The ability of the GFC, EPA and GGMC to monitor all activities taking place in the forests of Guyana must be assessed to determine the investments that will be needed to execute this task effectively. The necessary framework to improve this collaboration will also be determined.
- Develop a programme to target investment and capacity building need of communities to reduce deforestation and forest degradation. Assist Amerindian communities in the development of alternative economic activities whilst respecting their rights as Amerindian to preserve their traditions and culture.
- Develop a training and education programme for miners on REDD + as well as sustainable use of forest resources for mining.
- Develop programme to promote the use of more sustainable agricultural practices in order to minimize the effect of the effects of agriculture on the forest resources, as well as to promote the use of more efficient technologies.
- New infrastructural development across the country has implications for Guyana's forests. A capacity building and support plan needs to be developed to promote a better understanding of REDD + & implications of infrastructural development on REDD + as well as to promote better planning oversight and implementation of projects.
- Establish accountable benefits sharing mechanisms to ensure that incentives are transparently and equitably shared.

The Table below outlines the link between Strategies, Capacity Building needs and Indicators of Success

STRATEGY	CAPACITY BUILDING REQUIREMENT	INDICATOR (S) OF SUCCESS
Conduct Investment assessment and develop capacity building plan for national and community level needs to engage in REDD + activities.	Develop the institutional capacity of Government agencies and local communities to ensure that they are sufficiently able to plan, execute and monitor REDD + strategies.	<ul style="list-style-type: none"> - Investment Assessment report completed - Capacity building plan developed
The promotion, training and education on the interpretation and implementation of natural resources legislation, policy and guidelines.	To train stakeholders in SFM and other natural resources management techniques and thereby promote the REDD + agenda	<ul style="list-style-type: none"> - Capacity building sessions held in 10 Administrative Regions of Guyana - Maintenance of a high standard of natural resources management practices
Effective monitoring of State Forests to reduce illegal activities and unsustainable practices activities that contribute to deforestation.	<ul style="list-style-type: none"> - To strengthen the verification of legality of origin of forest produce - To increase the use of GIS in forest monitoring - To improve the efficiency in the use of GFC's tagging system 	<ul style="list-style-type: none"> - Maintenance of a high level of legality of forest harvesting, and trade. - Maintenance of low rates of deforestation and forest degradation - Increased and improved usage of GIS for monitoring
Develop a training and education programme for miners on REDD + as well as sustainable use of forest resources for mining.	Develop the capacity of the mining sector to improve mining practices and reduce forest degradation & deforestation	<ul style="list-style-type: none"> - Capacity building sessions held in 10 administrative regions - # of person & communities trained in SFM practices
Programme to promote more REDD + & sustainable agricultural practices & efficient technologies	To improve agricultural practices and reduce its impacts on the forest sector	<ul style="list-style-type: none"> - Capacity building sessions held in 10 administrative regions
Capacity building and support plan for infrastructural development & REDD +	Plan developed to promote a better understanding of REDD + which is expected to lead to better M&E	

Establish accountable funding/benefits sharing mechanisms to ensure that incentives go to the right people	To ensure that a system of benefit sharing is developed that satisfies the needs of both the GoG and the communities involved	Mechanism developed for benefits sharing
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Summary
 The Component seeks to develop institutional frameworks and capacity for coordination on land use in the context of REDD +, for carbon monitoring and reporting to be included within impact assessments and cost-benefit studies, and to access forest carbon financing schemes and equitable benefits sharing mechanisms.

The assessment of investments and capacity building requirements will be done as part of the readiness phase. It is recognized that more investment and capacity building will be necessary to enable Guyana to gain the maximum benefit from any post-Kyoto REDD + scheme.

Guyana will work with relevant agencies, stakeholders and other partners to ensure that within three years, the basic capacities and institutional capabilities to implement REDD + strategies will be developed. Capacity building will be a long term, continued effort that is not expected to be completed within the next three years.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3
Assess the investment requirements and develop capacity building plan for institutions			
Collaborate with government agencies working on land tenure arrangements as well as examine aspects of carbon ownership across different tenure and management options			
Training and education on the interpretation and implementation of natural resources legislation, policy and guidelines.			
Establishment of an equitable benefits sharing mechanism			
Establish and develop a communication link with other countries (as appropriate) to enable the sharing of ideas and lessons learnt			

Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Examine Investment and Capacity needs	Assess the investment requirements and develop capacity building plan for institutions	25,000	25,000	25,000		75,000
	Training and education on the interpretation and implementation of natural resources legislation, policy and guidelines.	5,000	30,000	30,000		65,000

Enable effective communication other partners	Establish and develop a communication link with other countries (as appropriate) to enable the sharing of ideas and lessons learnt	5,000	5,000	5,000		15,000
Address matters regarding land tenure	Collaborate with government agencies working on land tenure arrangements as well as examine aspects of carbon ownership across different tenure and management options	25,000	40,000	60,000		125,000
Develop benefits sharing mechanism	Establishment of an equitable benefits sharing mechanism	30,000	50,000	30,000		110,000
Total		90,000	150,000	150,000		390,000
Government		15,000	20,000	15,000		50,000
FCPF		75,000	130,000	135,000		340,000
UN-REDD Programme (if applicable)						
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

2d. Strategic Social and Environmental Assessment (SESA) in the Formulation of the REDD + Strategy

Overall Context

Reducing Emissions from Deforestation and Forest Degradation (REDD) is a proposed global mechanism to mitigate climate change, while mobilizing financial resources for socio-economic development in forest countries. The Forest Carbon Partnership Facility (FCPF), facilitated by the World Bank, brings together 50 donors and forest countries with the aim to support these forest countries in the preparation and subsequent implementation of their REDD + Strategies.

Guyana is a key participant country in the FCPF. The Government of Guyana (GoG) is currently finalizing a Readiness Preparation Proposal (R-PP; still in draft), and has requested a FCPF Readiness Preparation Grant to support the design of its REDD + Strategy. This Strategy aims to: (a) protect and maintain Guyana's standing forests; (b) contribute to the reduction of global carbon emissions; and, at the same time, (c) mobilize financial resources for the country's overall development whilst allowing for sustainable natural resources utilization.

SESA Objectives

One of the integral steps in the preparation of Guyana's REDD + Strategy is the conducting of a Strategic Environmental and Social Assessment (SESA) during the Readiness Preparation phase of the FCPF in order to identify, and to help integrate, the key environmental, social, legal and policy dimensions into the REDD + Strategy. The SESA is designed specifically to undertake a series of analytical and diagnostic studies in a participatory manner. Additionally, the findings of the SESA will provide the basis for drafting and finalizing the required World Bank safeguard policy instrument. More specifically, the SESA is designed to:

- a. identify, in a participatory manner, the key environmental and social impacts as well as the legal and policy implications of the proposed REDD + strategy;
- b. conduct studies on the identified key environmental and social impacts of the proposed REDD + strategy/activities and its legal and policy implications in an integrated, and inter-disciplinary manner;
- c. consult stakeholders (see Annex III for a preliminary list of stakeholders) during the course of the analytical studies, and seek comments and inputs on the SESA outputs including the World Bank safeguard instrument;
- d. recommend, based on the findings of the analytical studies as well as the inputs of stakeholders, the key environmental, social, legal and policy issues to be integrated into the final design of the Guyana REDD + strategy; and
- e. prepare the relevant social and environmental management framework required under the World Bank safeguards policies that will guide the implementation of the REDD + strategy/activities.

Scope of Analytical and Diagnostic Studies

In order to identify and determine specific environmental and social impacts as well as the legal and policy implications, SESA will include at the minimum the following analytical and diagnostic studies carried out in a participatory manner within the specific country context of Guyana.

1. Environmental Studies

- a) *Environmental services provided by forests* (timber and non-timber products, medicines, conservation of biological diversity, watershed protection, etc.);
- b) *Main direct and underlying causes leading to deforestation and forest degradation*; (Linked to R-PP Component 2b: Design the REDD + Strategy)
- c) *Estimated economic value of forest goods and environmental services* lost by deforestation and degradation annually;
- d) *Environmental health risks* (such as malaria, malnutrition, and others affecting forest populations, in general, and children in particular); and
- e) *Use of land and forest resources*.

2. Social Studies

- a) Assessment to determine culturally-appropriate consultations with and participation of local communities and of other stakeholders, including the identification of key stakeholders for REDD +;
- b) Analytical and diagnostic studies on Amerindian People:
 - a. Preparation of socioeconomic profiles of Amerindian People, including
 - i. Traditional livelihood practices and sustainable alternative economic activities
 - b. Preparation of report on progress made in land tenureship
 - c. Assessment of impacts of logging, mining and afforestation initiatives.
- c) Analytical and Diagnostic Studies on other stakeholders (such as small scale miners and loggers)
 - a. Assessment of impacts on their livelihoods due to restriction of access to natural resources; and
 - b. Assessment of sustainable alternative livelihood activities.

3. Legal and Policy Review

- a) Laws, regulations and policies that are applicable to or relate to any efforts necessary to reduce carbon emissions, ensure equitable benefit-sharing and respect of traditional rights and livelihoods, including the relevant provisions of: the Constitution; the Forests Act and Forests Bill; the Mining Act; the Amerindian Act; the Iwokrama Act; the Guyana Lands and Survey Act; the Environmental Protection Act; the National Parks Commission Act; the Kaieteur Park Act; and the Local Government Act.
- b) Relevant international treaties and other instruments to which Guyana needs to comply for REDD + to be implemented or to take into consideration, including treaties related to: Climate Change; Biodiversity; and, the UN Declaration on the Rights of Indigenous Peoples.
- c) Relevant court decisions that could have an impact on REDD +, including those decisions of international tribunals, such as those at the Organization of American States.

4. Compliance with World Bank Safeguard and Disclosure Policies

Anticipating potential impacts that may result from the implementation of the REDD + strategy, the following World Bank safeguard policies appear applicable, at this time, to the proposed REDD + operation in Guyana:⁹

- a. Environmental Assessment (OP 4.01)
- b. Natural Habitats (OP 4.04)
- c. Forests (OP 4.36)
- d. Physical Cultural Resources (OP 4.11)
- e. Indigenous Peoples (OP 4.10)
- f. Involuntary Resettlement (OP 4.12) (To manage restriction of access to natural resources)
- g. Safety of Dams (OP 4.37) (TBD)
- h. Projects on International Waterways (OP 7.50) (TBD)
- i. Projects in Disputed Areas (OP 7.60)

Steps for SESA Consultative Process

Component 1b of the Guyana R-PP details the overall consultation and participation framework of stakeholders in preparing the Guyana REDD + Strategy during the Readiness Preparation phase. Drawing upon the principles of consultation and participation outlined in Component 1b, the SESA consultative process will specifically guide the analytical and diagnostic studies to be carried out during the Readiness Preparation phase. A specific budget is allocated for the SESA consultative process.

It is imperative that consultations on the SESA during the Readiness Preparation phase involve key stakeholders such as the traditional Amerindian village councils, the National Toshias' Council (NTC) and the NGOs, representing the Amerindian People and other stakeholder groups (small-scale logging and mining communities).

The SESA will plan, implement and finalize its activities in the following manner:

Phase 1 (Prior to Readiness Grant)

⁹ Readiness Safeguard Data Sheet (RSDS) has been prepared to document the application of safeguard policies to the Guyana REDD + operation supported by FCPF. Final determination on the application of World Bank safeguard policies to the REDD + operations will be made during the Readiness Preparation phase.

- a. *Dissemination of the draft SESA ToR* to seek initial feedback from stakeholders;
- b. *Finalization of the SESA ToR* integrating the initial feedback received; and
- c. *Disclosure of finalized SESA ToR.*

Phase 2 (During Readiness Preparation Phase)

- a. *Organization of series of focused workshops/consultation sessions* to share information and seek inputs and feedback on the findings of the analytical and diagnostic studies. The workshops/consultations will be organized at the local, regional, and national levels. Relevant documents will be made available prior to such workshops/consultations. Amerindian People will be consulted in an adequate and culturally-appropriate manner following the international good practices and taking into account their issues of language and gender;
- b. *Organization of a national workshop* to present and discuss the final findings of the analytical and diagnostic studies and to agree on the key findings to be integrated into the REDD + Strategy; and
- c. *Public disclosure of the World Bank Safeguard policy instruments* and their revision through a series of focused workshops with the Amerindian people and other stakeholders (small-scale logging and mining communities).

The estimated duration of the SESA process is approximately 12 months, including the preparation of the relevant World Bank safeguard policy instruments. This timeline does not include the time needed to incorporate the findings of the SESA in the preparation of the Guyana REDD + Strategy and subsequent preparation of the Readiness Package.

KEY PROFESSIONAL EXPERTISE

In order to help build local capacity, national expertise (NGOs, Academia, etc.) will constitute a part of the consultancy team responsible for conducting the analytical and diagnostic studies. Furthermore, the NTC will facilitate the consultations with the Amerindian People in order to take into account local and traditional knowledge and the community-level expertise.

The analytical and diagnostic work as well as the drafting of the World Bank safeguard policy instruments will be carried out by qualified professionals with expertise (see Annex IV for required expertise), including the following:

- a. Environmental Experts
- b. Social Impact experts
- c. Legal Experts
- d. Experts on World Bank safeguard policies
- e. Experts in participation/ consultation, outreach and communication

SESA OUTPUTS

SESA will prepare the following specific reports and documents that have been finalized in close consultations with key stakeholders, including the Indigenous People and other stakeholders:

1. **Consultation and Participation Framework** (CPF), including a Communications and Outreach Plan (Linked to Component 1(b) "REDD + Consultation and Outreach" of the Guyana R-PP);
2. **Monitoring and Evaluation Framework** (MEF) (Linked to Component 4 of the Guyana R-PP "Design and Implementation of Monitoring, Reporting and Verification System for REDD +");
3. **Environment and Social Management Framework** (ESMF) acceptable to the World Bank (see Annex II for details on the requirements) that will include specific sections on safeguards policies, including:
 - a) Environmental Assessment (EA) to address any potential environmental impacts as required by the World Bank Environmental Assessment Policy (OP 4.01);
 - b) Process Framework (PF) for restriction of access to natural resources as required by the World Bank Involuntary Resettlement Policy (OP 4.12), which will also include restriction of access to natural resources outside of parks and protected areas; and
 - c) Indigenous Peoples Planning Framework (IPPF) as required by the World Bank Indigenous Peoples Policy (OP 4.10).
4. **SESA Summary Report** should contain the following:
 - o Key findings of the analytical and diagnostic studies; and

- Key consultations outcomes during the SESA process and how feedback from stakeholders have been taken into account in finalizing the REDD + Strategy.
- Recommendations

5. **Compilation** of the respective environmental, social, legal and policy reports prepared under SESA.

Summary

One of the integral steps in the preparation of Guyana’s REDD + Strategy is the conduct of a Strategic Environmental and Social Assessment (SESA) during the Readiness Preparation phase of the FCPF in order to identify, and to help integrate, the key environmental, social, legal and policy dimensions into the REDD + Strategy. The SESA is designed specifically to undertake a series of analytical and diagnostic studies in a participatory manner. Additionally, the findings of the SESA will provide the basis for drafting and finalizing the required World Bank safeguard policy instrument. More specifically, the SESA is designed to:

- a. identify, in a participatory manner, the key environmental and social impacts as well as the legal and policy implications of the proposed REDD + strategy;
- b. conduct studies on the identified key environmental and social impacts of the proposed REDD + strategy/activities and its legal and policy implications in an integrated, and interdisciplinary manner;
- c. consult stakeholders (see Annex III for a preliminary list of stakeholders) during the course of the analytical studies, and seek comments and inputs on the SESA outputs including the World Bank safeguard instrument;
- d. recommend, based on the findings of the analytical studies as well as the inputs of stakeholders, the key environmental, social, legal and policy issues to be integrated into the final design of the Guyana REDD + strategy; and
- e. prepare the relevant social and environmental management framework required under the World Bank safeguards policies that will guide the implementation of the REDD + strategy/activities.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3
Development of a Consultation and Participation Framework for the SESA and execute consultation sessions			
Development of a Monitoring and Evaluation Framework			
Development of an Environmental and Social Management Framework			
Develop SESA Summary reports, other studies, assessments, etc			

Table 2d: Summary of Social and Environmental Impact Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Development of SESA Framework	Development of a Consultation and Participation Framework for the SESA and execute consultation sessions	80,000	30,000			110,000
	Development of an Environmental and Social Management Framework	80,000	40,000			120,000
	Development of a Monitoring and Evaluation Framework	40,000	20,000			60,000
Execution of relevant technical studies and assessments	Develop SESA Summary reports, other studies, assessments, etc	40,000	10,000			50,000
Total		240,000	100,000			340,000
Government		20,000	20,000			40,000
FCPF		220,000	80,000			300,000
UN-REDD Programme (if applicable)						
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

Component 3: Develop a Reference Scenario

Objectives for this component:

The relatively low deforestation rate in Guyana is 0.1 percent to 0.3 percent (UN FAO FRA 2005, Colchester 1999). Using an average above-ground stock of 340 t CO₂e per hectare (the average of the estimates of Hans ter Steege, 2001, and Brown (1997), and an additional 20 percent of biomass below ground, the deforestation emissions since 2000 have averaged 22.6 million t CO₂e per year. It is more difficult to estimate the historical emissions from degradation.

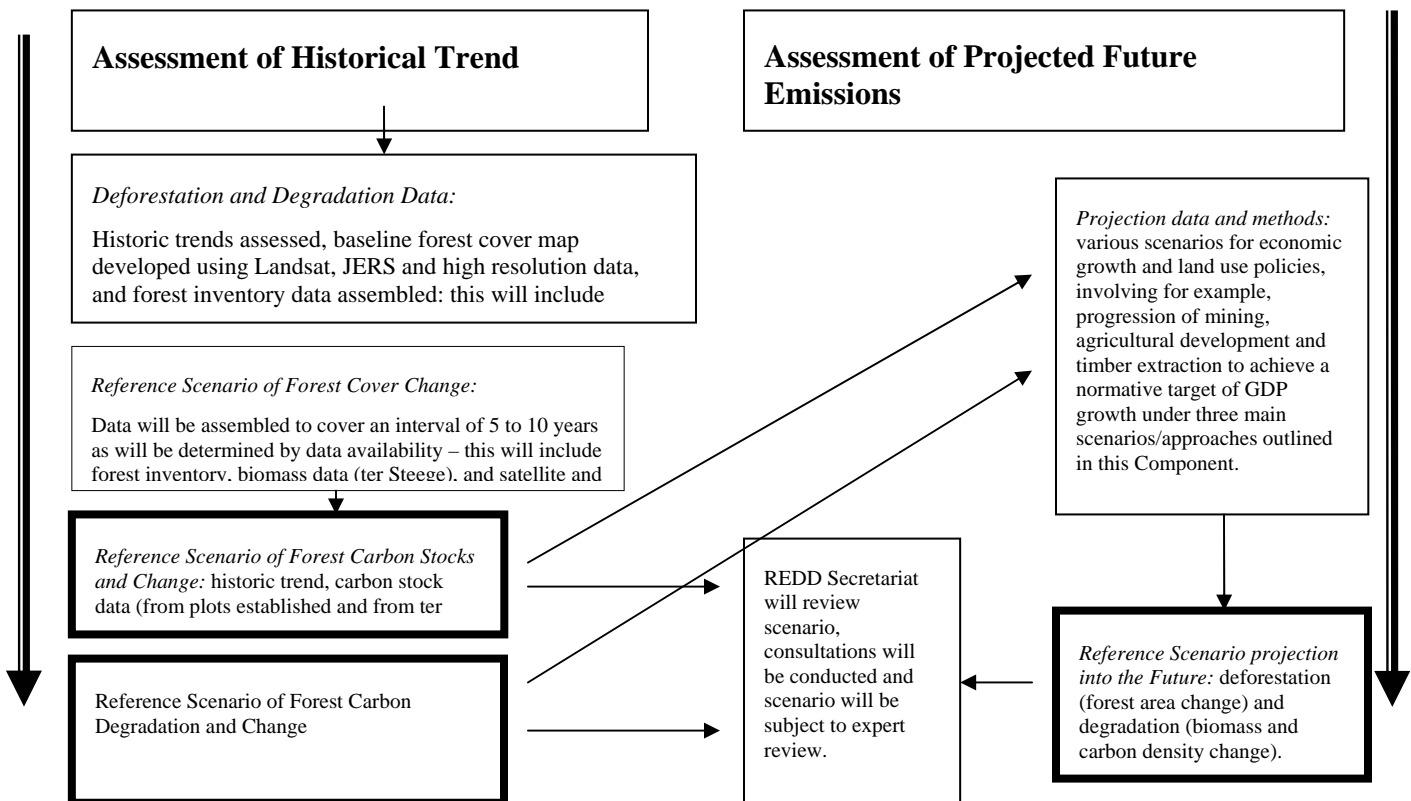
Guyana’s reference scenario will be developed following the Intergovernmental Panel on Climate Change Good Practice Guidelines (IPCC GPGs) and will establish the historic emissions level and projected emissions level, using both field data and remote sensing data. Approaches for creating projections are defined in this Component.

Expected Outcome:

There are two main outcomes: the establishing of the historic emissions level and secondly, the development of the projected emissions level based on three approaches.

Reference Scenario Framework

The Framework which will be used is outlined as follows, and has informed the Activities set out to achieve the outcome:



Part I: Assessment of Historic Trend

Guyana has assessed the international policy discussions on REDD + and reference emissions scenario. This is summarized below¹⁰:

- For REDD + the reference emissions scenario under discussion is a national-level trend based on or projected from historical trends in emissions from forest change. These trends would be measured over multiple years (5–10) in order to reduce the impact of anomalous years.
- The reference period selected will likely be finalized through negotiations, but a more recent reference period (in the last 5–10 years) may better reflect current land-use trends and be most feasible given constraints in available data.
- Because financial compensation would be based on verifiable emission reductions from deforestation and forest degradation, a credible method for measurement is absolutely essential. Historical reference trends should have the following characteristics:

Time Period of data for estimating historic emissions:

This R-PP proposes for the historic emission baseline to be established using data from 1990. The final determination of the length of the interval will be defined as one of the initial activities of the process. Intervals that will be selected for monitoring will be done in concurrence with the MRVS which seeks to implement four biannual time steps in the past.

Existing Data

1. Forest inventory data from previous surveys and aerial photographic interpretation databank, national vegetation map, LANDSAT images for entire land cover over period 2005 to 200, selected swaths from Formosat, ALOS, CBERS and Aster image providers.
2. Timber Extraction Data from 1990 to present.
3. Forest areas allocation data from 1990 to present.
5. Macro economic and social data: GDP, employment, growth rates, inflation, per capita income levels, production by GDP economic activity areas (mining, agriculture, manufacturing, etc), housing statistics, population, etc.
6. Forest Inventory data from national inventory, and areas specific inventory of 1970, 1990 and 2000 to present at management level (sampling at 2 percent to 5 percent) and preharvest level (100 percent inventory of selected species).
7. At present, a national approach to assess forest carbon stock has not been developed for Guyana and needless to say, implemented in Guyana. Several aspects have however been addressed to some extent, in terms of assessing change in land cover through remote sensing imagery analyses and forest inventory assessment. Additionally, some work has begun in terms of biomass estimation in various soil types. There still however, needs to be a methodological assessment model developed to assess forest carbon stock at the national level drawing in some way, on the resources and results of these steps. Already initiated are 45 biomass permanent sampling plots established, with data currently being collected and collated.
6. The quality, specifically in terms of accuracy and consistency of all of the above data, are medium to high in accuracy. Number 1 is high in completeness with regards to forest inventory, API and LANDSAT coverage.

New Data

1. Results of assessment conducted under the MRVS in forest area assessment and biomass assessment and monitoring. This also includes assessment results of various drivers of deforestation and forest degradation.

¹⁰ Olander, P., et al, *Reference Scenarios for Deforestation and Forest Degradation in support of REDD +: a review of data and methods.* http://www.sage.wisc.edu/pubs/articles/F-L/gibbs/erl8_2_025011.pdf

Sensor	Resolution(m)	Approx Area Covered (km)	Application
MODIS	250	Guyana	Countrywide monitoring
Landsat	30	185 x 185	Large area detection & monitoring
Landsat			
DMC 11	32	660 x 4100	Large area detection & monitoring
CBERS	20	113 x 113	Large area detection & monitoring
IRS	1 to 40	Varies	All monitoring levels
Palsar radar	5 to 25	70 x 70 12	Large area detection & monitoring
ASTER	15	60 x 60	Hotspot monitoring
SPOT	2.5-20 m	60 x 60	Hotspot monitoring
ALOS	10	60 x 60	Hotspot monitoring
Formosat	8	60 x 60	Hotspot monitoring
QuickBird	4	16.5 x 16.5	Hotspot monitoring
IKONOS	2.2	11 x11	Hotspot monitoring

**Hotspots refer to "sampling method" and large area detection refer to "wall to wall method"*

1. High resolution data sets from a provider that meets the requirements of Guyana: <10 percent cloud cover, 2m to 15m resolution with preferably 24km to 70km or more swath. (as smaller swaths can be costly to secure for total areas that may be required) To allow for greater accuracy, high resolution data and aerial photographs will be needed to supplement medium resolution data.
2. Socio economic and macro economic data, for future periods, including projected GDP data, natural resources utilization: forestry, mining, agriculture, housing statistics, urban development, per capita income levels, population growth rates, etc. from relevant agencies.

Carbon Pools to be included

The overarching principle of conservativeness is required to be complied with whereby decreases in emissions will not be overstated. Carbon measurements pools will be defined: this will include an assessment of above ground tree biomass, below ground tree biomass, and an assessment of the relative importance of additional carbon pools. Existing data collection by the GFC will be assessed in this regard. Certain pools such as soil carbon or even dead material tend to be quite variable and can be relatively time consuming and costly to measure. The decision to include these pools in the operational monitoring would therefore be made based on whether they represent a key category and available financial resources. Soils will likely represent a key category in peat swamp forests and mangrove forests and carbon emissions are high when deforested. For forests on mineral soils with high organic carbon content and deforestation is to cropland, as much as 30 percent of the total soil organic matter stock will be lost in the top 30 cm or so during the first five years. Dead wood is a key category in old growth forest where it can represent more than 10 percent of total biomass. (GOFCD GOLD Source Book)

Currently, it is envisaged that investigation will be made into all sources and all pools through initial assessments and decisions taken following this, as to which pools to exclude. There is required to be consistency on the application of such inclusion/exclusion in reference case and monitoring of later emissions. In estimating carbon stocks, identification of the strata where carbon stock assessment is necessary, will be conducted. This will focus on a sub classification of the key carbon pools. Some carbon pools may not need to be monitored routinely. However, some categories that are relevant to old growth forest will have to be included, such as deadwood which is a key category to monitor for forests with such characteristics as it reportedly represents more than 10 percent of total biomass.

Part II: Assessment of Projected Future Emissions

Approaches for projection of emissions, and rationale for selection

The approaches that are tentatively identified to be used are:

- **Scenario 1** – Projection based on historic trend prior to using the business as usual approach (without REDD +)
- **Scenario 2** – Projection based on undertaking a development plan to realize macroeconomic targets
- **Scenario 3** – Projection based on undertaking a development plan implemented with Carbon financing mechanism in place (includes REDD +)

¹¹ DMC proposes to launch higher resolution 22 m imagery in 2009. Price provided is for tasked imagery.

¹² Palsar footprints vary by acquisition mode; 5 m data covers 70 x 70 km and 25m data approximately 360 x 280 km.

- **Scenario 4-** Projections based on Guyana fully utilizing its forests for various natural resources extractive activities and other uses, to generate revenues for development

The reason for this selection is to allow for the implications on emissions using the current trend, projected into the future to be realized; secondly, to assess the implications on emissions for Guyana’s development goals to be realized; and thirdly to assess the implications for Guyana’s development plans with an effective carbon financing mechanism in place. The scenarios chosen will be finalized as part of the readiness process. Considerations for reference scenario modeling will be taken with regards to existing arrangements with other partners as well as developments in procedures and guidelines made by various internationally recognised groups and fora.

Activities to achieve outcome:

The list below gives a more detailed appraisal of those activities and further actions required for the development of a reference scenario. These points are explained in more detail in the draft framework Terms of Reference (ToR) in Annex.

1. Assessment of data available on forest area, land cover change and carbon density.
2. Development of historical trend reference scenario for looking at land cover change, forest carbon density and deforestation and forest degradation.
3. Complete reference scenario modeling for: development plan, trends and macroeconomic trends forecasting following compilation of data on these areas.
4. Review by independent expert.

Partners and organizations involved:

GFC will lead and coordinate this component, using the services of specialist consultants; facilitate workshops and consultations, and provide all datasets relating to the forestry components. The Bureau of Statistics will be the primary source for data required for non-forestry components. The Ministry of Finance will review and guide economic projections of GDP that will drive consumption components. Other relevant Ministries and agencies will be consulted as required to fill any gaps in data and confirm model assumptions.

Indicators of performance for this objective:

1. Data on forest area, land cover change and carbon density.
2. Historical reference scenario developed
3. Reference scenarios projection completed
4. Review completed by independent Expert

Summary

The relatively low deforestation rate in Guyana is 0.1percent to 0.3 percent (UN FAO FRA 2005, Colchester 1999). Using an average above-ground stock of 340 t CO₂e per hectare (the average of the estimates of Hans ter Steege, 2001, and Brown (1997), and an additional 20 percent of biomass below ground, the deforestation emissions since 2000 averaged 22.6 million t CO₂e per year. It is more difficult to estimate the historical emissions from degradation.

The reference scenario will be developed following the Intergovernmental Panel on Climate Change Good Practice Guidelines (IPCC GPGs) and will establish the historic emissions level and projected emissions level, using both field data and remote sensing data. Tentative approaches for creating projections are defined in this Component.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3
Integration of MRVS data and results into Reference Scenario Modeling			
Scenario modeling done for identified scenarios at both historic and future time periods.			

Review by independent expert.			
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Table 3: Summary of Reference Scenario Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (US\$)				
		2010	2011	2012	2013	Total
Design reference scenario model in readiness framework	Integration of MRVS data and results into Reference Scenario Modeling	75,000	75,000			150,000
Develop reference models	Scenario modeling done for identified scenarios at both historic and future time periods.		240,000			240,000
Conduct Independent assessment	Review by independent expert.			90,000		90,000
Total		75,000	315,000	90,000		480,000
Government		20,000	20,000	10,000		50,000
FCPF		55,000	295,000	80,000		430,000
UN-REDD Programme (if applicable)						
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

Component 4: Design a Monitoring System

While policy and compensations mechanisms for implementing REDD + are still under discussion within the UNFCCC, the draft text on methodology for REDD + produced by SBSTA 30 in June 2009 and SBSTA 31 in December 2009, makes it clear that not only reduced emissions from deforestation and degradation, but also forest conservation, sustainable forest management and forest enhancement are likely to be included in the agreement which will be finalized at the climate summit in Mexico in December 2010. These three elements are jointly referred to as 'REDD +'. In this regards, it will now allow HFLD countries such as Guyana to benefit from existing good practices already being carried out, such as sustainable forest management practices, enhancement and conservation

This creates some certainty about the contours of the agreement and what will be credited, as well as opportunities to use a variety of approaches to measuring and monitoring. One key measure to quantify the role of a forest for climate change mitigation is to sum the carbon stored in its terrestrial pools (i.e. vegetation biomass and soil carbon). It can be assumed that any change in the forest carbon stocks from direct or indirect human activities has an impact on the climate with the overall goal to reduce the amount of emissions to the atmosphere and to maintain or increase the overall terrestrial carbon pool. Thus, climate change mitigation activities currently under discussion encourage:

- the long-term conservation of forests to maintain its current or natural carbon reservoir,
- changing the impact of human activities (i.e. causing carbon emissions from land use) in forests to stabilize or increase terrestrial carbon stocks in the long-term,
- change in current human activities towards reforestation of land to increase the terrestrial carbon sink.

These generic and fundamental objectives are addressed in the REDD+ and the LULUCF discussions in a number of concepts, such as deforestation, forest degradation, forest conservation etc. These reflect the need to specify policies to alter human activities towards a more climate friendly way. This includes means to measure and report carbon impacts on the local, national and global level. Current international REDD + discussions are dealing with carbon and emission-oriented approaches; the national implementation has to consider a cause- or driver oriented perspective to design and implement useful policies.

It is currently not practical or efficient to measure and report the stocks and changes for the whole terrestrial carbon reservoir with the level of detail and certainty to address all drivers and processes that have a carbon impact on the land. REDD + readiness activities in Guyana are encouraged to start right away and will need to include a priority setting given that:

- Countries, in general, start from a diverse set of backgrounds in terms of historical drivers and changes in forest carbon; expected future land use changes due to their development objectives; and current capabilities for measuring and monitoring forest carbon on the national and local level.
- Current human land use impacts causing carbon emissions are focused in specific areas and regions and should, perhaps, be primarily addressed in the very near-term. However, it is the long-term stabilization or increase of the terrestrial carbon reservoir as a whole that will decide on the effectiveness of the activities initiated today and to eventually implement a low carbon development strategy for Guyana,
- Resources to address REDD + will be limited and not suitable to address all issues everywhere at the same time. While all requirements and forest change drivers and processes should be addressed from the beginning, their entry points will vary and priority setting and efficient implementation strategies will be needed at the international, national and sub-national level.

As an initial step to the implementation of a MRVS for Guyana, a road map for the development of a MRV system for REDD + participation for Guyana was designed following a stakeholder participation session. The development of such a road map considered several aspects that have been elaborated in the facilitation process and for preparing Terms of Reference for developing an REDD + MRV system:

1. Requirements for the MRV system:

- The accepted principles and procedures of estimation and reporting of carbon emissions and removals at the national level should meet criteria specified by the IPCC Good Practice Guidelines and Guidance for reporting on the international level;

- The particulars of the national REDD + implementation strategy that have been selected, since different activities have different MRV implications;
2. Bridging the capacity gap through a detailed plan to establish sustained MRV capacities within the country:
- Capacity gap assessment based on the state of the existing national forest monitoring technical capabilities and the requirements for the MRV system;
 - Develop a road map and foster its implementation through a sustained and efficient institutional framework including competence in measuring and monitoring at different levels, support of national policies and REDD + actions, international reporting and verification, and linking MRV of actions and MRV of transactions.

The outcomes of the initiative, as outlined in the MRV capacity development roadmap, are as follows:

- The overall goal is a capacity development process to establish a sustained MRV for implementing REDD + policies and results-based compensation for such activities in the long-term as a contribution to Guyana's low carbon development pathway and support for the sustainable development of natural resources;
- The development of a national REDD + MRV system that uses a phased approach along a roadmap that specifies near-term priorities & long-term targets; builds upon existing capacities and data; and international requirements and national needs; and has the objective to support annual estimation; reporting and verification of forest-related carbon emissions and removals at the national level;
- The MRV system evolution is directly linked with REDD + policy development and implementation and contains a systematic national monitoring, reporting and verification system and a sub-national programme to support MRV for local REDD + activities;
- A strong institutional base and the establishment and maintenance of partnership and cooperation at all levels as enabling framework.

Seven specific areas were identified where activities are recommended for the first phase and should start as soon as possible:

- Develop and implement a national mechanism and institutional framework
- Implement a comprehensive forest area change assessment for historical periods
- Build carbon stock measurement and monitoring capacities
- Develop MRV for a set of sub-national REDD + demonstration activities
- Engagement with the international community
- Sustain an internal and national communication mechanisms
- Conduct and support research on key issues.

MRVS Steering Committee & Technical Sub-Committee

As part of the oversight and guiding mechanism for the MRVS development and implementation for Guyana, a MRVS Steering Committee and Technical Sub-Committee have been established.

The MRVS Steering Committee comprises representatives from GFC, GGMC, GL&SC, NTC, EPA, FPA, GGDMA, UG and MoAA.

The Technical Subcommittee comprises technical experts from GFC, GGMC, GL&SC, and EPA. These members are expected to provide technical oversight to the implementation of various aspects of the MRV as well as provide advice to the MRVS Steering Committee.

The primary function of the MRVS Steering Committee will be to take responsibility for overseeing the development and implementation of Guyana's Monitoring Reporting & Verification System. The Steering Committee will monitor and review the status of various aspects of the MRVS development, as well as provide oversight of project deliverables. Members will be tasked with ensuring that objectives of the various components of MRVS development are being adequately addressed. More specifically, the Committee is expected to carry out the following functions:

1. Oversee the implementation of all MRVS activities;
2. Provide assistance to the project when required;
3. Ensure that scope aligns with the agreed requirements of projects and advise on means by which key stakeholder groups are kept informed of progress in the development of the MRVS;
4. Contribute inputs from representative agencies that each member is a part of, to ensure close cohesion and coordination of MRVS activities implementation.

5. Participate in the review and selection of consultants from the bidding process;
6. Monitor and manage the progress made in implementation of MRVS road map activities;

4a. Emissions and Removals

Guidelines

The current UNFCCC SBSTA negotiation text (June 2009¹³) refers to the need to establish monitoring systems that use an appropriate combination of remote sensing and ground-based forest carbon inventory approaches with a focus on estimating anthropogenic forest-related greenhouse gas emissions by sources, removals by sinks, forest carbon stocks and forest area changes. It is agreed that the IPCC Good Practice Guidelines on Land Use Land Use Change and Forestry (LULUCF) provide suitable and agreed methods and procedures to estimate and report on carbon stock changes for deforestation, forest degradation, forest conservation, reforestation, afforestation etc. All MRV activities and estimates should follow the five IPCC reporting principles and should particularly be transparent, comparable, consistent, as accurate and complete as possible, and should reduce uncertainties, as far as national capabilities and capacities permit). It is further indicated that these monitoring systems and their results will be open to independent review as agreed by the Conference of the Parties.

The table below lists some of the key information sources currently available to Guyana as international guidance. In that context, the UN REDD programme has specified a set of key considerations for development of national MRV systems:

- 1 – Monitor What Matters
- 2 – Warrant Multi-stakeholder process
- 3 – Ensure Quality, Reporting and Verification compliance
- 4 – Guarantee Availability and Accessibility of data and Methods
- 5 – Support Investment and Sharing of Benefits
- 6 – Strengthen Institutional, Technical, Legal and Policy Development Capacities

These considerations clearly point at the need for country-specific and country-driven solutions for developing capacities and partnerships that certainly go beyond technical MRV considerations and include a participatory process and the exploration of co-benefits and synergies. CIFOR has been proposing the “3 E’s concept” of efficiency, effectiveness and equity as guidance for both REDD + related policies and MRV developments and their linkages in REDD + readiness and implementation. The 3 E’s concept, for example, provides a framework to consider the diverse set of needs and requirements for both policy and MRV on the national and sub-national level:

Overview of Needs for Guidance, Analyses and Advice on National MRV and Key Information Available.

Need	Whose need	Key information provided by
International principles and guidance for measuring & reporting on carbon stock changes & emissions	Individual Parties	IPCC Good Practice Guidance for LULUCF ¹⁴

¹³ UNFCCC SBSTA 30 decision and draft text for Copenhagen negotiated in June 2009 (should be available to workshop participants): <http://unfccc.int/resource/docs/2009/sbsta/eng/i09.pdf>

¹⁴ *Guidelines (2003) on Land Use Land Use Change and Forestry (LULUCF), focus on chapters 2 and 3:*

http://www.ipcc-nggip.iges.or.jp/public/gpplulucf/gpplulucf.html, Guidance on Agriculture Forestry and other Land Uses (AFOLU), focus on chapters 1-4: <http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html>

Additional information on methods and procedures for MRV	Individual Parties	GOFC-GOLD Sourcebook
Analysis of current national MRV capacities	Individual Parties; International community	Assessment of national forest monitoring capacities ¹⁵
Analysis on costs of developing national MRV systems	Individual Parties International community	UNFCCC technical paper on costs for REDD + MRV
Concepts for national REDD + architectures (incl. link of policy and MRV)	Individual Parties	CIFOR book on national REDD + architecture and policies
Advice on how to develop national MRV system	Individual Parties	UN REDD programme (framework, www.un-REDD.org)

Efficiency: using transparent, consistent and cost-effective data sources and procedures, sets up an institutional infrastructure and establishes sustained capacities within the country that meet its national and international REDD + requirements and enables to report forest carbon changes using the IPCC GPG in the long-term;

Effectiveness: supports and is driven by the development and implementation of a national REDD + policy and its areas of priority area of actions;

Equity: integrates MRV actors and activities for local measurements and monitoring, national-level monitoring and estimation, and international guidance, and supports independent review, to ensure participation and transparency among different stakeholders involved.

These considerations currently provide the most comprehensive and up to date foundations to develop MRV systems as part of national readiness process. Building upon the existing guidance and principles, the workshop discussions did go deeper in assessing requirements and capacity needs, and providing suggestion for MRV capacity development strategies and actions that reflect Guyana's specific country circumstances. The process will follow the fundamental assumptions:

1. The overall goal is to establish a capacity development process to implement a sustained MRV system for implementing REDD + policies and results-based compensation for such activities in the long-term as contribution to Guyana's low carbon development pathway. In general, any progress for REDD+ MRV fosters integrated decision making for resource management, and, thus, by itself, provides an important foundation for any future development.
2. The development of a national REDD + MRV system uses a phased approach along a roadmap that specifies near-term priorities & long-term targets and is based on:
 - a. Building upon existing capacities and data, international requirements and national needs for Guyana's REDD + participation,
 - b. the objective to support annual estimation, reporting and verification of forest-related carbon emissions and removals on the national level,
 - c. the need to maintain some flexibility to adjust the activities in case the details of REDD + compensation mechanisms are agreed internationally;
3. The MRV system evolution is directly linked with REDD+ policy development and implementation and contains a systematic national monitoring, reporting and verification system and a sub-national programme to support MRV for local REDD + activities;
4. A strong institutional set up and the establishment and maintenance of partnership and cooperation on all levels provides the framework that includes:
 - a. a steering body coordinating all REDD+ MRV activities and the implementation of the roadmap,
 - b. the Guyana Forestry Commission as executive agency,

¹⁵ An assessment of national forest monitoring capabilities in tropical non-Annex I countries:
http://princes.3cdn.net/8453c17981d0ae3cc8_q0m6vsqxd.pdf

- c. a process for involving all relevant national stakeholders involved in MRV and REDD + implementation and mechanisms to ensure transparent and open exchange and management of data,
- d. building partnerships and cooperation with key national and international organizations that help Guyana in implementing the road map.

Assessing Drivers of Deforestation

In Guyana, as part of its Readiness Preparation Proposal to the World Bank's Forest Carbon Partnership Facility, initial, national level quick assessments were done on the drivers of deforestation and forest degradation: a qualitative assessment based on national sectoral analysis, and a quantitative assessment based on GIS and Remote Sensing Data.

The current understanding of processes affecting forest carbon is not suitable for defining and implementing REDD+ actions. An assessment is required to be conducted, using these initial assessments, on the drivers of deforestation and forest degradation and will include the following key areas:

- Assessing drivers of deforestation
- Identifying causes of forest degradation
- Identifying the likely impacts on carbon stocks from both deforestation and forest degradation
- Assessing areas of forest subject to logging
- Quantifying degradation of carbon stocks by forest fire

Monitoring Forests and Forest Area Change

Activity Data - Approaches

One of the areas identified as initial activities involve the assessment of forest area change. IPCC GPG suggested Approach 2 for reporting activity data involves tracking of land conversions between categories. Both approaches 1 and 2 provide "net" area changes. Approach 3 extends Approach 2 by using spatially explicit land conversion information; thus allowing for an estimation of both "gross" and "net" changes. Thus, Approach 3 which allows the spatial tracking of land change trajectories is the suggested practical approach for REDD + implementation.(GOFC-GOLD Sourcebook) The MRVS is expected to adopt an Approach 3 method, in assessing activity data.

Initial work on emission factors will commence in the first phase of the initiative. This will begin by utilizing existing and newly collected data on carbon stocks, and will be informed by processes of destructive sampling and targeted sampling. The emission factors are derived from assessments of the changes in carbon stocks in the various carbon pools of a forest. Carbon stock information can be obtained at different Tier levels: Tier 1 uses IPCC default values (i.e. biomass in different forest biomes, carbon fraction etc.); Tier 2 requires some country-specific carbon data (i.e. from field inventories, permanent plots), and Tier 3 national inventory-type data of carbon stocks in different pools and assessment of any change in pools through repeated measurements or modeling. Moving from Tier 1 to Tier 3 increases the accuracy and precision of the estimates, but also increases the complexity and the costs of monitoring. (GOFC-GOLD Sourcebook)

The MRVS for Guyana will commence with a Tier 2 approach for the readiness phase with accuracy and precision assessments conducted, and cost of monitoring tabulated. Capacities will be built progressively in the system for movement to a Tier 3 approach.

Remote Sensing

The establishment of the MRVS Steering Committee for the REDD + MRVS will be required as an initial activity in the first phase of the Road Map. One of the aspects that this Body will oversee is the coordination of data and key inputs and the setting up of a national mechanism to feed into the LCDS framework. This data infrastructure will include a consolidation of existing remote sensing data and resources that are currently available.

Datasets and analysis of a temporal coverage spanning two time periods 2005 and 2006-2008 are available for Guyana at both the Guyana Forestry Commission and the Guyana Geology and Mines Commission. This is a total of 34 Landsat scenes (17 for each time period), and a combination of recent ASTER image over identified hotspots (marked by areas of major change) for 2008 and 2009 and ALOS data over identified hotspots for 2008 and 2009.

Capacity exists at the GFC, GGMC and GLSC in preprocessing images and in visual interpretation. Human capacity will need to be built in areas of automated interpretation for deforestation, as well as other areas

related to processing and analysis of the results, and the monitoring of areas undergoing forest degradation.

GIS and RS capability reside at the GFC, GL&SC and the GGMC. Guyana Integrated Natural Resources Information System (GINRIS) is an existing database that comprises land use data on the major land uses in Guyana. This database is housed at the GL&SC. This system was established to develop the GIS capacity in Guyana & to serve as repository for national GIS information. The objective was to have one central database where all of the information could be stored and accessed. GINRIS has mapping coverage of 1 - 50:000 mapping scale coverage of country and allows for data sharing by the regulatory natural resources agencies which in turn allows for better coordination amongst agencies. It also allows for the use of information that is standardized, a related legislative reform and development of a national data management system and infrastructure to foster transparency, efficiency and for national and international reporting. One of the initial activities will involve the establishment of a national coordination mechanism, and will include exploring the possible integration and revitalization of the GINRIS-system and will be used to upgrade to use a broader set of data types.

In order to allow for an integrated approach to executing Approach 3, it is required for a system to be developed and housed at the Guyana Forestry Commission, that will complement GINRIS, and that will allow for networking from key agencies that will record and report on individual sector data. The agencies that will be linked to this system are the GFC, GLSC, GGMC, the Hydrometeorological Division, Ministry of Amerindian Affairs, and other relevant agencies that may be identified.

Algorithms are required to be developed to interpret and estimate emissions. Interpretation will commence with visual interpretation and will move towards automated methods, the latter of which may be done by supervised labeling and clustering, and will be accompanied by training and correction phases. Also required, is pre processing of images which needs to be accompanied by geometric correction, cloud and cloud shadow detection and removal, radiometric corrections and image segmentation.

Degradation

In assessing degradation, the intensity, extent of area and technique to be used are important considerations. Very high spatial resolution sensors will be required for mapping low intensity degradation. This will be informed by activity data. The spectral resolution and quality of the radiometric signal must be taken into account for monitoring forest degradation at high spatial resolution. The estimation of the abundance of the materials (i.e., end-members) found with the forested pixels, through SMA, requires at least four spectral bands placed in spectral regions that contrast the end members spectral signatures.¹⁶ The Brazilian model will be assessed for possible extrapolation to Guyana, as outlined in GOFC-GOLD Source Book. Additionally, Brazil's DETEX system will be assessed for possible applicability to Guyana. The Sample Design should also recommend a field based monitoring system that will allow for ground monitoring of degradation, again informed by activity data.

Resource and Capacity Requirement

In addition to the software outlined in the table below, capacity will also need to be built at the institutional level at the GFC to operate such a system as well as to utilize satellite images for forest degradation monitoring and assessment.

Defining key terms in Guyana's context for the MRVS is an important aspect of the preliminary work that will be done. This includes defining forests, deforestation, forest degradation, etc.

Monitoring Forest Carbon Stocks

Field Data

As outlined in the Roadmap, the activities that will be undertaken in the initial stage will include the design and implementation of a national carbon measurement system. This will involve the designing of national and sub-national stratification, the development of sample design and the conducting of required statistical analyses and the development of protocols for measurement of all carbon pools.

The REDD + readiness work will commence on a Tier 2 system and will employ static forest biomass information as well as country specific data. It is expected to also resolve forest biomass at finer scaled

¹⁶ GOFC-GOLD p. 32

through delineation. For degradation, Tier 2, using the stock change method seems to be a suitable starting point. Tier 3 will however be explored as a future step, and efforts will be required to allow for the system to progressively move into a Tier 3 system; starting initially to explore Tier 3- level monitoring in sub-national demonstration sites. Guyana has commenced work in assessing forest carbon stock.

Method of Estimating CO₂ Emissions

Appropriate carbon pools will be assessed and emissions and net removals will also be determined. Land conversion by sub categories (if necessary) within various land uses will also be required to be defined and emissions and net removals will be assessed as per these sub categories. In conducting overall carbon estimating, carbon emissions into the atmosphere, transfer of carbon to other pools will also have to be considered, like in the case of biomass to deadwood during logging.

The LULUCF Guidelines recommend either a stock-difference method or a gain-loss method for estimating the annual carbon stock change in biomass and dead organic matter (DOM) in “Forests Remaining Forests” (the land-use subcategory that encompasses forest degradation). In general, the gain- loss method is applicable for all tiers, while the stock-difference method is more suited to Tiers 2 and 3 assuming its application involves accurate and complete forest inventories based on sample plots. (GOFC-GOLD Sourcebook)

The stock based approach as well as the gain loss approach will be assessed for applicability. It is recognized that the stock based approach requires estimates in both mineral and organic soil. Whether this is assessed as possible during the carbon stock assessment process will determine the suitability of this process. The Gain Loss Method requires for biomass growth rates to be collected. In the Tier 2 method, a combination of methods can be used to assess some carbon pools, e.g. soil. The method that will be used by Guyana will need to be consistently and uniformly applied and IPCC compliant.

Reporting

The main principles of transparency, consistency, comparability, completeness and accuracy will be the key to an effective reporting framework. The reporting framework will be IPCC compliant. Although the reporting framework has not yet been decided at the level of the Conference of Parties, until such time that they are designed, the existing GHG inventory reporting format will be referred to as a guide to this process.

Reporting tables include classification of initial and final land use categories, identification and measurement of activity data, emissions factors, total change on carbon stock and total CO₂ emissions. Relevant explanations and notations should also be provided in reporting formats. An example of this table is presented in GOFC-GOLD Sourcebook. Reporting will also be done in the initial phases prior to the MRVS being completed, along the interim performance indicators (mainly area based indicators) that Guyana will be required to report on as part of a financing mechanism.

Verification

Quality assurance and quality control procedures will be required to be developed. Accuracy assessments will be used to provide a check for bias and of confidence in predictions, through testing the system in a range of circumstances to check whether any inaccuracies in the results are biased toward over or underestimation in a national inventory.

MRV systems are a long-term proposition and should be allowed to evolve over time. There will therefore be a need for continuous improvement in the system. Using the verifications and accuracy assessments efforts can be made to progressively improve models over time.

Uncertainty assessment will also be required to assess the confidence that can be placed in the overall result of the model application at the reporting scale. Accuracy assessments are an important part of testing for any bias in inventory results. Validation and verification are also required and this is planned to be done by an independent 3rd Party expert.

Principal National Stakeholders

A high-level Steering Body is required to be set up to oversee the MRV roadmap development and implementation and to monitor progress along the Road Map; also with respect to national policies. A technical committee will be led by the Guyana Forestry Commission, with a mandate of overseeing the technical MRVS activity implementation. Guyana is also seeking to build national and international partnerships that help the implementation of the MRV roadmap.

It is tentatively foreseen that the following, will be the principal national and sub-national stakeholders in the process, some of whom will be members of the Steering Body.

Summary of Joint Capacity of the main Land Management Agencies in Guyana: GFC, GGMC and GL&SC

Information System Capability	Human and Physical Capacity	Data Availability	Gaps that Institutions have identified based on current mandate
1. Integrated GIS	<p>Computed resources, integrated server, trained persons in geo referencing, geo rectifying, masking, identification of areas subject to change, identify of driver of change by visual inspection, digitizing of area of change, merging of assessment at national level and generation of final national level data.</p> <p>GPS mapping</p>	<ol style="list-style-type: none"> 1. Land area monitoring of large and medium size mining claims. 2. Water quality data on suspended sediments (turbidity and TSS) for a five year period for Guyana, and 10 -15 years for various rivers. 3. Dredge locations August 2009. 4. Tidal water quality data for Essequibo River. 5. Forest Roads and Rivers Map 6. Soil Map (NARI) 1:1,000,000 scale 7. Vegetation Map 1:1,000,000 scale 8. Topographic Map 1:50,000 9. Gazetteer of Guyana 10. 1:50,000 level river networks are available for Administrative Regions 1, 3, 6, 8 and 10. Work is currently done for Regions 7 and 9. 	<p>Management of small claims needs further integration into land management system</p> <p>Time series of Dredge location data/real time position logging.</p> <p>Integrated data management system</p> <p>Improved quality control in land tenure information assessments through GIS needs (maps) being updated.</p> <p>Baseline mapping is required to be updated on the majority of land titles in Guyana's interior since previous work would have been based on natural features.</p> <p>Updated mapping of coastal region to allow for establishing of urban spread and title management.</p>
2. Remote Sensing Assessments	<p>Remote sensing image analysis software, trained persons in conducting remote sensing assessments including: geo referencing, digitizing of area of change,</p>	<ol style="list-style-type: none"> 1. Landsat medium resolution images (20m) for entire land cover of Guyana for 2005 and 2006. 2. Aeromagnetic data at 200m line spacing. 3. Scanned 1: 50,000 topographic base maps 4. JERS 30m resolution imagery 5. SRTM 90m DEM 6. JERS 1999 – 500M 7. Landsat 2006 – 2009 – national coverage 8. PALSAR 2009 (hotspots coverage) 9. CBERS 2009 (hotspot coverage) 	<p>High resolution images for mining hotspots</p> <p>Aeromag does not cover the Pakaraima mountains</p> <p>Automated detection of forest land area change needed</p> <p>Cataloguing of existing satellite imagery data.</p>
3. Geological	<p>Trained Geologists and technicians</p> <p>Geo-chem Lab</p>	<ol style="list-style-type: none"> 1. Geological data. 2. Geochemical assay data for 42 elements. (selected project areas and company data) 3. Structural data (faults, lineament interpretation) 4. Mineral occurrence in 	<p>Geo-chemical samples for areas out of project areas</p> <p>Structural data is based on previous work and does not cover the entire country one equal scale</p>

		Guyana 5. SN Barron library	Mineral Potential map needed for Guy.
4. Forest Concession Management and Legality Assessment	Trained staff in visual detection of occurrences of illegality based on a decision tree framework, forest area allocation and planning.	1. Forest concession allocation map 2. Change detection system	Integrated planning and management with other natural resources agencies
5. Field Data on forest inventory, and initial work on forest carbon stock assessment	Staff trained in executing forest inventory and in establishing forest biomass monitoring plots, destructive sampling of soil and necromass, some training in roots and tree destructive sampling, and in ground truthing and some training in verifying data via aerial surveys	1. Report on carbon storage capacity by soil type (Hans ter Steege, 2001) 2. Biomass Monitoring System reports and Baseline Assessment 3. 135 Biomass monitoring plots established 4. Management level inventory for various areas in Guyana.	Additional training in tree and roots sampling. Training and creation of framework in the integration of this work into an MRVS.

Proposed Approach to Designing the Monitoring System

Capacity Gap Assessment

The evaluation of Guyana's capacities and REDD + specific characteristics provide the basis to specify the recommendations and next steps for developing capacities for the implementation of an MRVS for Guyana. Starting with an assessment of current capacities, additional information on country-specific characteristics and requirements for REDD + were analyzed and discussed. The capacity gap assessment was performed for both international requirements (IPCC GPG) and national needs (through an assessment of current forest change processes).

As synthesis of the capacity gap assessment, the national MRV development principles defined seven key action areas as immediate activities for starting the capacity development process for Guyana:

1. Develop and implement a national mechanism and institutional framework:
 - Steering body for the MRV system development (Office of climate change as coordinator of activities)
 - Coordination and integration of national datasets through a high-level national technical committee accompanied by a related legislative reform and development of a national data management system and infrastructure
 - Participation, scientific advice and international partnering, i.e. through the establishment of a technical and scientific advisory group
2. Conduct a comprehensive forest area change assessment for a historical period:
 - Processing and interpretation of historical archived satellite datasets at national level for forest area change, benchmark forest map and exploration of the monitoring of forest degradation
 - Capacity building component included from the beginning
3. Build carbon stock measurement capacities:
 - Design a national and sub-national stratification
 - Design protocols and implement measurements in all carbon pools
 - Targeted sampling and surveys to establish national conversions/expansion factors
4. Develop MRV for a set of REDD + demonstration activities
 - Focus on key drivers/processes and engagement with implementation actors (i.e. land owners, communities)
 - Conduct detailed monitoring at demonstration sites
5. Engagement with international community:
 - Explore the possibility of the GEO Task to help in satellite data acquisition from 2009 onwards
 - Partner with international organizations and research partners
 - Seek further advise/coordination with international activities
6. Sustained internal communication mechanism on MRV:

- Development communication plan and outreach materials
 - Conduct a series of regional workshops and consultation to inform about REDD + and MRV
7. Conduct/support research on key issues
- Scoping exercise for linking policy and MRV (actions, transactions)
 - Detailed national driver assessment and methods for reference level projection
 - Co-benefits of MRV (i.e. to support LCDS) and tools for decision-support in the context of integrated natural resources management

The execution of the work will be centralized at the Guyana Forestry Commission and this agency will be the focal agency for coordinating all aspects of data collection, analysis, research execution and assessments and for routine continuous monitoring of the system. This agency will work with all consultants, data providers and suppliers, and stakeholders of the MRVS.

Road Map for MRV System Development

The development of a road map for the establishment of a system for measurement, reporting, and verification (MRV) as an initial investment to participate in any REDD + mechanism requires the consideration of a number of necessary steps and different types of gaps to be addressed in different phases. The road map lists expected outcomes and capacity improvements for these different phases, as well as, a set of specific activities to fill four different types of gaps.

Most importantly, REDD + policy should drive MRV activities and vice versa, and this interaction needs to be established from the beginning. One of the fundamental questions initially is whether sufficient data are existing for the country to explore REDD + opportunities and formulate a national REDD + policy strategy and scope, and demonstrate implementation activities. This issue is targeted in the first phase and should be tackled right away, also considering opportunities for early REDD + implementation and demonstrations. The seven priority action areas from the workshop discussions provided in the previous section will be used as baseline to specify efforts for the first phase.

Activities include the establishment of missing institutional arrangements and filling some existing gaps to first derive initial datasets (data gap filling). The results should provide a thorough understanding on the activities of drivers and processes and their forest carbon impact, and how policies can be defined and implemented to affect them. In this phase, Guyana will also be aiming to build basic capacities to report on a set of interim performance indicators that will respond to an international REDD + mechanism, focused on area based changes.

The co-evolution of the MRV system and the national policy mechanisms to support the positive impact of REDD + actions continues in the readiness phase where the development of technical capacities, institutional arrangements and policies will result in the establishment of the reference level. This process will help provide the foundations for the eligibility to participate in REDD + results-based crediting mechanisms. In both the readiness and the implementation phase the large emphasis on measurements and monitoring will be extended to reporting and verification, i.e. through the establishment capacities to apply the IPCC GPG for international reporting.

The implementation process may also include an effort to fill a methodological gap. Initial measurement and monitoring activities will use readily available (historical) data and methods that may be limited in achieving, for example, accuracy and completeness in national forest carbon monitoring and the GHG inventory. Furthermore, a consolidated national REDD + implementation strategy and an analysis of IPCC key categories will result in a prioritization of what needs to be monitored, reported and verified in the long-term with the main objective being to contribute to efforts in the key areas and processes designated with respect to REDD + implementation actions.

The current road map is associated with a timeline of 2010/11 for phase 1, 2011/12 for phase 2 and post 2012/13 for the implementation phase. This timing reflects the current planning and maybe accelerated if desired, i.e. the need to move towards a full Tier 3 system for participating in new REDD + compensation instruments.

MRV road map – objectives and expected key results for different phase

	National strategy (2010/11) →	Country readiness (2011/12) →	Implementation (post 2012)→
Objectives	Gather and integrate information & fill data gaps for national REDD + opportunities, scoping and policy development	Develop capacities, conduct historical monitoring, and implement a (minimum) IPCC Tier 2 national forest carbon monitoring, establish the reference level and report on interim performance	Establish consistent and continuous MRV supporting national REDD + actions and international IPCC GPG-based reporting and verification
Key results and national capacities developed	<ol style="list-style-type: none"> 1. Comprehensive MRV roadmap developed and national MRV steering body operational 2. Improved national capacities on LCDS, REDD +, IPCC-LULUCF, and carbon dynamics 3. Framework and capacities to demonstrate REDD + implementation and interim performance 4. All data available and accessible (including acquisition of new forest carbon data) on drivers and processes needed for developing a national REDD + policy and interim implementation plan 5. Established communication and participation mechanism to involve relevant stakeholders nationally and internationally 6. Approaches for setting reference levels, linking MRV and policy, and MRV co-benefits and synergies are explored and defined 	<ol style="list-style-type: none"> 1. Capacities in place for consistent and continuous acquisition and analysis of key data for Tier 2 nationally and Tier 3 for demonstration/activity sites including international reporting using IPCC LULUCF; uncertainty assessment MRV improvement plan developed 2. Reference level established based on historical data, and future developments using internationally accepted methods 3. All data available and accessible for an updated national REDD + implementation plan 4. Regular reporting on REDD + demonstrations and interim performance 5. Continued engagement with key national stakeholders for REDD + implementation and assuring long-term sustainability of MRV capacities (i.e. universities) 6. Monitoring system explored to cover key variables for other ecosystem services 	<ol style="list-style-type: none"> 1. IPCC key category analysis and assessment for Tier 3 approaches completed and implemented (if desired) 2. Independent international review of full MRV system completed 3. Capacity in place and implementation to deliver verification and compliance assessment for REDD + results-based compensation 4. National data infrastructure of forest greenhouse gas inventory and assessment in place for regular reporting 5. Implementation plan to use new and proven technologies to reduce uncertainties and increase efficiency of MRV system 6. Framework developed that links REDD + into LCDS monitoring, reporting and verification system

MRV road map – specification of activities for gap filling

	National strategy →	Country readiness →	Implementation →
Objectives	Gather and integrate information & fill data gaps for national REDD + opportunities scoping and policy development	Develop capacities, conduct historical monitoring, and implement a (minimum) IPCC Tier 2 national forest carbon monitoring, establish the reference level and report on interim performance	Establish consistent and continuous MRV supporting national REDD + actions and international IPCC GPG-based reporting and verification
Data gap filling	<ul style="list-style-type: none"> • Gather, evaluate and integrate existing data sources on the national level • Acquire additional data (if needed) to analyze (the carbon impact) of all relevant historical forest change processes and drivers (i.e. using satellite data, initial carbon stock assessments and ancillary information) • Assessment of historical and current processes of forest carbon change for formulating national REDD + policy strategy and related MRV priorities, and respond to an initial set of interim performance indicators 	<ul style="list-style-type: none"> • Establish mechanisms and partnerships with relevant data sources (i.e. satellite data) to facilitate availability to Guyana in a consistent and continuous way • Data gathering and analysis of drivers and factors of forest carbon change to support an assessment of future driver activities and related/projected forest carbon changes • Collect data for a first comprehensive uncertainty assessment of the different measurement and monitoring components 	<ul style="list-style-type: none"> • Conduct an IPCC key category analysis • Assess opportunities and data gaps to move towards Tier 3 on the national or sub-national (if desired) • Foster and support REDD + activity-based monitoring by different actors as part of national framework
Eligibility gap filling	<ul style="list-style-type: none"> • Develop a national REDD + strategy • Involvement of all relevant stakeholders at the national and sub-national level – set up a sustained two-way communication mechanism • Participation in international REDD + and REDD + readiness processes • Scope a framework for immediate demonstration actions and interim 	<ul style="list-style-type: none"> • Continued involvement of all relevant stakeholders at the national and sub-national level • Provide an assessment of carbon emissions (and removals) as historical reference level and expectations/forecasting future development • Develop a national implementation plan and related policies to encourage REDD + actions 	<ul style="list-style-type: none"> • Implement an international review of the MRV system • Prepare regular interactions and reporting on REDD + implementation activities and on the IPCC LULUCF inventory • Verification and compliance assessment comparing performance against the reference

	performance indicators that will respond to an international REDD + mechanism	by relevant stakeholders <ul style="list-style-type: none"> • Implement and evaluate REDD + implementation activities, and report performance for interim indicators 	level
Capacity and institutional gap filling	<ul style="list-style-type: none"> • Complete a comprehensive assessment of existing data and capacities considering international and national MRV requirements • Set up a national MRV coordination mechanism to steer the capacity development and assign roles and responsibilities • Develop capacities to monitor given a set of interim performance indicators • Engage in general capacity building on REDD +, IPCC-LULUCF, terrestrial carbon dynamics and key standard methods • Interaction with local actors and key implementation bodies on their role for MRV 	<ul style="list-style-type: none"> • Build sustained capacities to conduct regular and consistent forest and forest area change monitoring using remote sensing and GIS • Establish capacities and implement a systematic national forest carbon measurement and monitoring system, i.e. through permanent sample plots. • Scope and evaluate a sub-national, activity-based measurement programme, to monitor key REDD + implementation actions • Training and implementation of reporting (IPCC LULUCF) including an institutional framework • Develop and implement an uncertainty assessment and a long-term improvement plan for the MRV system • Scope the involvement of national/regional higher-education institutions 	<ul style="list-style-type: none"> • Continuous training and improvement for institutions and activities providing data and analysis for the REDD + MRV system, • Build a national spatial data infrastructure for IPCC LULUCF reporting and REDD + implementation • Develop additional monitoring capacities (if needed, to go for Tier 3) • Build a system for verifying REDD + actions on the national level using MRV data and other information, link MRV of transactions • Develop and implement an uncertainty assessment and a long-term improvement plan for the MRV system • Implement capacities in higher-education institutions on REDD + MRV for university curricula
Methodological gap filling	<ul style="list-style-type: none"> • Interaction and partnership with national and international research organizations on key issues • Exploration of methods and approaches 	<ul style="list-style-type: none"> • Interaction and partnership with national and international research organizations on key issues • Develop frameworks for interlinked 	<ul style="list-style-type: none"> • Foster activities to reduce uncertainties and increase efficiency of MRV system • Implement evolving technologies

	<p>for establishing reference levels</p> <ul style="list-style-type: none">• Evaluate concepts for linking MRV, REDD + policy and implementations• Explore potential co-benefits and synergies of the carbon measurements with other monitoring needs	<p>implementing REDD + policies and MRV and linking MRV of actions and MRV of transactions</p> <ul style="list-style-type: none">• Exploration of evolving technologies for REDD + MRV• Assess the requirements of monitoring carbon variables and relevant information for other ecosystem services	<p>into regular REDD + MRV activities</p> <ul style="list-style-type: none">• Finalize exploration of REDD + MRV and implementation including broader ecosystem services and environmental accounting procedures and make recommendations.
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4b. Other Benefits and Impacts

The evaluation of Guyana's capacities and REDD + specific characteristics provide the basis to specify the recommendations and next steps for developing capacities for the implementation of an MRVS for Guyana. Starting with an assessment of current capacities, additional information on country-specific characteristics and requirements for REDD + were analyzed and discussed.

Some of the other benefits which are foreseen to be derived include:

1. involvement and empowerment of local communities through building the capacities of local communities to become engaged in activities relating to the MRVS;
2. third party verification
3. more coordinated and harmonized monitoring and enforcement by the local natural resources management agencies
4. improved in country capacities to address areas such as Remote Sensing, carbon stock assessment and governance

The capacity gap assessment was performed for both international requirements (IPCC GPG) and national needs (through an assessment of current forest change processes, Table below).

This table also identified main processes that impact on forest carbon change in Guyana's forest.

Capacity gap assessment for national needs (forest change processes)

Processes that effect forest carbon stocks	Who is responsible for the execution of the activity?	Effects on the forest (carbon effect per ha): sink or source	How important is the process nationally (area affected)?	Importance (carbon impact)	Current responsibilities & data/monitoring activities and capacities	Suggested activity to fill data gap in the near term
Forest land conversion for agriculture (Livestocks, crops, and aquaculture)	Investors	Source - Large	Large	Very high	GL&SC GFC – in the case of the quick assessment report Some data on area change and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather/integrate existing data on the national level 2. Remote sensing based, area / land use change assessment 3. In situ carbon stock measurements & conversion of inventory data
Forest land conversion for mining	Local miners and companies	Source – large, low to medium if rehabilitation to improve carbon stock in the future	Large	High	GGMC GFC - in the case of the quick assessment report Some data on area change and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather/integrate existing data on the national level 2. Remote sensing based area / land use change assessment 3. In situ carbon stock measurements & conversion of inventory data
Logging activities	Government agencies Holders of Forest Leases	Source – medium to low (depending on level of sustainability and long term regeneration)	Large	High	GFC-concessions Some data on area affected and harvest estimates (non on carbon emissions and long term effects)	<ol style="list-style-type: none"> 1. Gather data on national level and evaluate data with remote sensing assessment 2. Conversion of existing harvest estimates into carbon 3. Additional field measurements 4. Study long-term effects
Forest land conversion for roads	Government agencies Forest Lease holders Miners Developers	Source - large	Large	Very high	Ministry of Public Works GFC EPA Some data on area change and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather/integrate existing data on the national level 2. Remote sensing based area / land use change assessment 3. In situ carbon stock measurements & conversion of inventory data

Forest land conversion for urban development (housing)	Forest Lease holders Miners Developers	Source - large	Medium	High	Ministry of Housing Forest Lease Holders Mine Lease Holders And Developers Some data on area change and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather/integrate existing data on the national level 2. Remote sensing based area / land use change assessment 3. In situ carbon stock measurements & conversion of inventory data
Forest land conversion for energy development	Investors Multilateral institutions Government agencies	Source - large	Medium	High	GEA Office of PM EPA Some data on area change and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather/integrate existing data on the national level 2. Remote sensing based area / land use change assessment 3. In situ carbon stock measurements & conversion of inventory data
Fires (agricultural fires and accidental burning of forest)	Local communities Villages Farmers Hunters	Source - medium	Small	Medium	GFC Local communities Villages Limited data on area affected and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather data on national level and evaluate data with remote sensing assessment 2. Targeted ground surveys to assess carbon impact
Issue of subsistence farming (incl. Fire)	Local communities Villages	Source - zero to medium (depending on fate of land, maybe carbon neutral in the long term)	Small	Low	Local communities Villages Community based NGOs No data on area change and non on carbon impact	<ol style="list-style-type: none"> 1. Engage communities/NGO in monitoring 2. Gather data on national level and evaluate data with remote sensing assessment 3. Targeted ground surveys to assess carbon impact
Forest Protection	NGOs, GFC EPA Local communities Villages Large concessionnaires	Overall carbon Neutral but large if counted as avoided source	Large	High	EPA NGOs(National and International) GFC National Parks Commission Ministry of Amerindian Affairs Some data on area change and limited on	<ol style="list-style-type: none"> 1. Gather data on national level 2. In situ carbon stock measurements & conversion of inventory data

					carbon stocks	
Forest land conversion for local agricultural economies in transition	Local communities Villages	Source - large	Small	Medium	Ministry of Agriculture Ministry of Finance through GOINVEST Limited data on area change and non on carbon emissions	<ol style="list-style-type: none"> 1. Gather/integrate existing data on the national level 2. Remote sensing based area / land use change assessment 3. In situ carbon stock measurements & conversion of inventory data
Mangrove improvement for sea defence purposes	GFC Sea Defence Department EPA	Sink - medium	Small	Low	Sea Defence GFC EPA Some data on area change and non on carbon sequestration	<ol style="list-style-type: none"> 1. Gather data on national level and evaluate data with remote sensing assessment 2. Targeted ground surveys and in situ for carbon sequestration

Summary

The establishment of this monitoring system seeks to provide annual, accurate estimates of changes in forest cover and degradation with national coverage by a transparent, objective and verifiable methodology. The reporting system provides comparisons between monitoring system output summaries and the reference scenario to provide net changes in carbon for REDD + accounting. The verification system requires that all procedures and data sources are objective, well-documented, secure and verifiable, and are subject to such peer-review and external audit as may be determined necessary.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3
Gather and integrate information & fill data gaps for national REDD + opportunities, scoping and policy development			
Develop capacities, conduct historical monitoring, and implement a (minimum) IPCC Tier 2 national forest carbon monitoring, establish the reference level and report on interim performance			
Establish consistent and continuous MRV supporting national REDD+ actions and international IPCC GPG-based reporting and verification			

Main Activity	Sub-Activity	Estimated Cost (in US\$)				
		2010	2011	2012	2013	Total
Establish data and information framework	Gather and integrate information & fill data gaps for national REDD + opportunities, scoping and policy development	450,000				450,000
Develop key capacities to execute MRV	Develop capacities, conduct historical monitoring, and implement a (minimum) IPCC Tier 2 national forest carbon monitoring, establish the	950,000	500,000			1,450,000

	reference level and report on interim performance					
Execute MRV on routine basis	Establish consistent and continuous MRV supporting national REDD + actions and international IPCC GPG-based reporting and verification		450,000	500,000		950,000
Total		1,400,000	950,000	500,000		2,850,000
Government		50,000	30,000	30,000		110,000
FCPF		400,000	510,000	200,000		1,110,000
Other Development Partner 1 (CI, KfW, Norway)		950,000	410,000	270,000		1,630,000
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

Component 5: Schedule and Budget

Please propose your detailed schedule, budget and allocation across donors in Table 5.

Table 5: Schedule and Budget						
Main Activity	Sub-Activity	Estimated Cost (US\$)				
		2010	2011	2012	2013	Total
1a. Manage and operate the REDD Secretariat	Execute of the day to day operational mandate of the RS	115,000	105,000	100,000		320,000
	Coordinate & execute the national Consultation and Outreach Plan	40,000	40,000	35,000		115,000
Develop conflict resolution mechanism	Development of a protocol to deal with complaints & conflict resolution	25,000				25,000
1b. Conduct Preparatory Activities for Outreach	Development of outreach material	130,000				130,000
Conduct Consultations	Conduct consultation activities, workshops and seminars	100,000	150,000	150,000		400,000
Public Awareness and Updating	Dissemination of materials for consultations through various media	25,000	25,000	25,000		75,000
2a. Finalize Assessment of Land Use, Policy and Governance	Updating & finalization of Quick Assessment Report	25,000				25,000
Update existing Policy Framework	Revising National Forest Policy and Plan	30,000	30,000			60,000
2b. Design REDD + Strategy Options	Identify REDD + Candidate Activities	20,000	30,000			50,000
	Design and Evaluate Pilot or demonstration Projects			150,000	150,000	300,000
Examine REDD + Strategy Options	Conduct specific studies, workshops and study tours, including trade off analysis.	40,000	50,000	40,000		130,000
Consult on REDD + Strategy Options	Attain overall feedback from consultations in the		30,000	30,000		60,000

	context of the Consultation Plan.					
2c Examine Investment and Capacity needs	Assess the investment requirements and develop capacity building plan for institutions	25,000	25,000	25,000		75,000
	Training and education on the interpretation and implementation of natural resources legislation, policy and guidelines.	5,000	30,000	30,000		65,000
Enable effective communication other partners	Establish and develop a communication link with other countries (as appropriate) to enable the sharing of ideas and lessons learnt	5,000	5,000	5,000		15,000
Address matters regarding land tenure	Collaborate with government agencies working on land tenure arrangements as well as examine aspects of carbon ownership across different tenure and management options	25,000	40,000	60,000		125,000
Develop benefits sharing mechanism	Establishment of an equitable benefits sharing mechanism	30,000	50,000	30,000		110,000
2d. Development of SESA Framework	Development of a Consultation and Participation Framework for the SESA and execute consultation sessions	80,000	30,000			110,000
	Development of an Environmental and Social Management Framework	80,000	40,000			120,000
	Development of a Monitoring and Evaluation Framework	40,000	20,000			60,000
Execution of relevant technical studies and assessments	Develop SESA Summary reports, other studies, assessments, etc	40,000	10,000			50,000
3. Design reference scenario model in readiness framework	Integration of MRVS data and results into Reference Scenario Modeling	75,000	75,000			150,000
Develop reference models	Scenario modeling done for identified		240,000			240,000

	scenarios at both historic and future time periods.					
Conduct Independent assessment	Review by independent expert.			90,000		90,000
4. Establish data and information framework	Gather and integrate information & fill data gaps for national REDD + opportunities, scoping and policy development	450,000				450,000
Develop key capacities to execute MRV	Develop capacities, conduct historical monitoring, and implement a (minimum) IPCC Tier 2 national forest carbon monitoring, establish the reference level and report on interim performance	950,000	500,000			1,450,000
Execute MRV on routine basis	Establish consistent and continuous MRV supporting national REDD + actions and international IPCC GPG-based reporting and verification		450,000	500,000		950,000
6. Monitor and evaluate activities	Finalise Monitoring Framework	5,000				5,000
	Monitor and evaluate Progress and develop Progress Reports	10,000	10,000	10,000		30,000
Report on activities progress	Disseminate reports and deliverables	15,000	10,000	10,000		35,000
	Develop final M&E Report			15,000		15,000
Total		2,385,000	1,995,000	1,305,000	150,000	5,835,000
Government		210,000	210,000	165,000	20,000	605,000
FCPF		1,225,000	1,375,000	870,000	130,000	3,600,000
Other Development Partner 1 (CI, KfW, Norway)		950,000	410,000	270,000		1,630,000

Component 6: Design a Programme Monitoring and Evaluation Framework

The REDD Secretariat will coordinate the preparation of monitoring and progress reports according to the requirements of FCPF. All activity centres will submit monthly or quarterly (as appropriate) and annual reports, which will form the basis for compilation of quarterly and annual programme reports.

Component	Mid Phase Indicators	Deliverables
Component 1- Organize and Consult	1a. National Readiness Management Arrangements	<ol style="list-style-type: none"> 1. Meeting reports of the RS & NRWG 2. Technical progress reports 3. Effective conflict resolution protocol 4. Outreach and consultation reports
	1b. Stakeholder Consultation and Participation	<ol style="list-style-type: none"> 1. Reports from consultations (based on communities' inputs & feedback) 2. Reports from Consultations available online. 3. Final Report on consultation and outreach activities in accordance with Plan
Component 2: Prepare the REDD + Strategy	2a. Assessment of Land Use, Forest Policy and Governance	<ol style="list-style-type: none"> 1. Revised Quick Assessment Report 2. Consultation reports in National Forest Policy and Plan Review 3. Review Report on Forest Plan and Policy
	2b. REDD + Strategy Options	<ol style="list-style-type: none"> 1. List of REDD + candidate activities 2. Specific studies, workshops, etc completed. 3. Design and evaluation of Pilot projects 4. Trade off analysis
	2c. REDD + Implementation Framework	<ol style="list-style-type: none"> 1. Investment and Capacity Plan 2. Final training and education report 3. Benefits Sharing mechanism 4. Effective communication link
	2d. Social and Environmental Impacts	<ol style="list-style-type: none"> 1. Initial consultation reports and technical reports on SESA Framework 1. Consultation and Participation Framework for SESA 2. Monitoring and Evaluation

		2. Initial technical assessments	Framework for SESA 3. Consultation Reports 4. Technical Studies and Assessments
Component 3: Develop a Reference Scenario		1. Acquisition of satellite & Remote Sensing images for specified historical period 2. Forest Area Assessment report 3. Reference Scenarios Assessment report	1. Data on forest area, land cover change and carbon density. 2. Historical reference scenario developed 3. Reference scenarios projection completed 4. Review completed by independent Expert
Component 4: Design a Monitoring System	4a. Emissions and Removals	1. Benchmark Forest Map 2. Reports on Capacity Building Session 3. Methodology (sample design, protocols, long term monitoring plan) developed for monitoring of forest carbon stock. 4. Report on interim performance 5. Reports from MRVS Steering Committee meetings & Technical Subcommittee meetings	1. Forest area change assessment for historical and current period 2. Carbon assessment and monitoring for carbon pools 3. Capacity developed in country in MRVS areas 4. Data and Reporting framework for MRVS 5. Consistent and continuous MRVS reporting 6. Report on REDD + Policy and Opportunities

Summary

The REDD Secretariat will coordinate the preparation of monitoring and progress reports according to the requirements of FCPF. All activity centres will submit monthly or quarterly (as appropriate) and annual reports, which will form the basis for compilation of quarterly and annual programme reports.

Readiness Preparation Proposal Components	Year 1	Year 2	Year 3
Finalise Monitoring Framework			
Monitor and evaluate Progress and develop Progress Reports			
Disseminate reports and deliverables			
Develop final M&E Report			

Table 6: Summary of Programme M&E Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (US\$)				
		2010	2011	2012	2013	Total
Monitor and evaluate activities	Finalise Monitoring Framework	5,000				5,000
	Monitor and evaluate Progress and develop Progress Reports	10,000	10,000	10,000		30,000
Report on activities progress	Disseminate reports and deliverables	15,000	10,000	10,000		35,000
	Develop final M&E Report			15,000		15,000
Total		30,000	20,000	35,000		85,000
Government		10,000	10,000	30,000		50,000
FCPF		20,000	10,000	5,000		35,000
UN-REDD Programme (if applicable)						
Other Development Partner 1 (name)						
Other Development Partner 2 (name)						
Other Development Partner 3 (name)						

Annexes (Optional)

Annex 2d: Social and Environmental Impact Assessment

GUYANA

REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD +) OPERATION SUPPORTED BY THE FOREST CARBON PARTNERSHIP FACILITY (FCPF)

STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA)¹⁷

DRAFT TERMS OF REFERENCE (ToR)

I. OVERALL CONTEXT

Reducing Emissions from Deforestation and Forest Degradation (REDD +) is a proposed global mechanism to mitigate climate change, while mobilizing financial resources for socio-economic development in forest countries. The Forest Carbon Partnership Facility (FCPF), facilitated by the World Bank, brings together 50 donors and forest countries with the aim to support these forest countries in the preparation and subsequent implementation of their REDD + Strategies.

Guyana is a key participant country in the FCPF. The Government of Guyana (GoG) is currently finalizing a Readiness Preparation Proposal (R-PP; still in draft), and has requested a FCPF Readiness Preparation Grant to support the design of its REDD + Strategy. This Strategy aims to: (a) protect and maintain Guyana's standing forests; (b) contribute to the reduction of global carbon emissions; and, at the same time, (c) mobilize financial resources for the country's overall development. The GoG is also formulating a Low Carbon Development Strategy (LCDS; currently in draft) as an overarching national development strategy for which REDD + would be one of the financing mechanism.

II. SESA OBJECTIVES

One of the integral steps in the preparation of Guyana's REDD + Strategy is the conduct of a Strategic Environmental and Social Assessment (SESA) during the Readiness Preparation phase of the FCPF in order to identify, and to help integrate, the key environmental, social, legal and policy dimensions into the REDD + Strategy. The SESA is designed specifically to undertake a series of analytical and diagnostic studies in a participatory manner. Additionally, the findings of the SESA will provide the basis for drafting and finalizing the required World Bank safeguard policy instrument. More specifically, the SESA is designed to:

- f. identify, in a participatory manner, the key environmental and social impacts as well as the legal and policy implications of the proposed REDD + strategy;
- g. conduct studies on the identified key environmental and social impacts of the proposed REDD + strategy/activities and its legal and policy implications in an integrated, and inter-disciplinary manner;

¹⁷ The Strategic Environmental and Social Assessment (SESA) constitutes part of Component 2d of the January 2010 Version of Guyana's R-PP.

- h. consult stakeholders (see Annex III for a preliminary list of stakeholders) during the course of the analytical studies, and seek comments and inputs on the SESA outputs including the World Bank safeguard instrument;
- i. recommend, based on the findings of the analytical studies as well as the inputs of stakeholders, the key environmental, social, legal and policy issues to be integrated into the final design of the Guyana REDD + strategy; and
- j. prepare the relevant social and environmental management framework required under the World Bank safeguards policies that will guide the implementation of the REDD + strategy/activities.

III. SCOPE OF ANALYTICAL AND DIAGNOSTIC STUDIES

In order to identify and determine specific environmental and social impacts as well as the legal and policy implications, SESA will include at the minimum the following analytical and diagnostic studies carried out in a participatory manner within the specific country context of Guyana.

7. Environmental Studies

- f) *Goods and services provided by forests* (timber and non-timber products, medicines, conservation of biological diversity, watershed protection, etc.);
- g) *Main direct and underlying causes leading to deforestation and forest degradation*; (Linked to R-PP Component 2a: Design the REDD + Strategy)
- h) *Estimated economic value of forest goods and environmental services* lost by deforestation and degradation annually;
- i) *Environmental health risks* (such as malaria, malnutrition, and others affecting forest populations, in general, and children in particular); and
- j) *Use of land and forest resources*.

8. Social Studies

- d) *Assessment to determine culturally-appropriate consultations with and participation of local communities and of other stakeholders*, including the identification of key stakeholders for REDD +;
- e) Analytical and diagnostic studies on Amerindian People:
 - a. *Preparation of socioeconomic profiles of Amerindian People*, including
 - i. *Traditional livelihood practices and sustainable alternative economic activities*;
 - b. *Preparation of report on progress made in land tenureship*; and
 - c. *Assessment of impacts of logging, mining and afforestation initiatives*.
- f) Analytical and Diagnostic Studies on other stakeholders (such as small scale miners and loggers)
 - a. *Assessment of impacts on their livelihoods* due to restriction of access to natural resources; and
 - b. *Assessment of sustainable alternative livelihood activities*.

9. Legal and Policy Review

- d) *Laws, regulations and policies* that are applicable to or relate to any efforts necessary to reduce carbon emissions, ensure equitable benefit-sharing and respect of traditional rights and livelihoods, including the relevant provisions of: the Constitution; the Forests Act and Forests Bill; the Mining Act; the Amerindian Act; the Iwokrama Act; the Guyana Lands and Survey Act; the Environmental Protection Act; the National Parks Commission Act; the Kaieteur Park Act; and the Local Government Act.
- e) Relevant *international treaties and other instruments* to which Guyana needs to comply for REDD + to be implemented or to take into consideration, including treaties related to: Climate Change; Biodiversity; and, the UN Declaration on the Rights of Indigenous Peoples.
- f) Relevant *court decisions* that could have an impact on REDD +, including those decisions of international tribunals, such as those at the Organization of American States.

10. Compliance with World Bank Safeguard and Disclosure Policies

Anticipating potential impacts that may result from the implementation of the REDD + strategy, the following World Bank safeguard policies appear applicable, at this time; to the proposed REDD + operation in Guyana:¹⁸

- j. Environmental Assessment (OP 4.01)
- k. Natural Habitats (OP 4.04)
- l. Forests (OP 4.36)
- m. Physical Cultural Resources (OP 4.11)
- n. Indigenous Peoples (OP 4.10)
- o. Involuntary Resettlement (OP 4.12) (To manage restriction of access to natural resources)
- p. Safety of Dams (OP 4.37) (*TBD*)
- q. Projects on International Waterways (OP 7.50) (*TBD*)
- r. Projects in Disputed Areas (OP 7.60)

IV. STEPS FOR SESA CONSULTATIVE PROCESS

Component 1b of the Guyana R-PP details the overall consultation and participation framework of stakeholders in preparing the Guyana REDD + Strategy during the Readiness Preparation phase. Drawing upon the principles of consultation and participation outlined in Component 1b, the SESA consultative process will specifically guide the analytical and diagnostic studies to be carried out during the Readiness Preparation phase. A specific budget is allocated for the SESA consultative process.

It is imperative that consultations on the SESA during the Readiness Preparation phase involve key stakeholders such as the traditional Amerindian village councils, the National Toshias' Council (NTC) and the NGOs, representing the Amerindian People and other stakeholder groups (small-scale logging and mining communities).

The SESA will plan, implement and finalize its activities in the following manner:

Phase 1 (Prior to Readiness Grant)

- d. *Dissemination of the draft SESA ToR* to seek initial feedback from stakeholders;
- e. *Finalization of the SESA ToR* integrating the initial feedback received; and
- f. *Disclosure of finalized SESA ToR.*

Part 2 (During Readiness Preparation Phase)

- g. *Organization of series of focused workshops/consultation sessions* to share information and seek inputs and feedback on the findings of the analytical and diagnostic studies. The workshops/consultations will be organized at the local, regional, and national levels. Relevant documents will be made available prior to such workshops/consultations. Amerindian People will be consulted in an adequate and culturally-appropriate manner following the international good practices and taking into account their issues of language and gender;
- h. *Organization of a national workshop* to present and discuss the final findings of the analytical and diagnostic studies and to agree on the key findings to be integrated into the REDD + Strategy; and
- i. *Public disclosure of the World Bank safeguards framework* and its revision through a series of focused workshops with the Amerindian people and other stakeholders (small-scale logging and mining communities).

The estimated duration of the SESA process is approximately 12 months, including the preparation of the relevant World Bank safeguard policy instruments. This timeline does not include the time needed to

¹⁸ Readiness Safeguard Data Sheet (RSDS) has been prepared to document the application of safeguard policies to the Guyana REDD + operation supported by FCPF. Final determination on the application of World Bank safeguard policies to the REDD + operations will be made during the Readiness Preparation phase.

incorporate the findings of the SESA in the preparation of the Guyana REDD + Strategy and subsequent preparation of the Readiness Package.

V. KEY PROFESSIONAL EXPERTISE

In order to help build local capacity, national expertise (NGOs, Academia, etc.) will constitute a part of the consultancy team responsible for conducting the analytical and diagnostic studies. Furthermore, the NTC will conduct the consultations with Amerindian communities and villages in order to assist in accounting for local and traditional knowledge and the community-level expertise.

The analytical and diagnostic work as well as the drafting of the World Bank safeguard policy instruments will be carried out by qualified professionals with expertise (see Annex IV for required expertise), including the following:

- f. Environmental Experts
- g. Social Scientists
- h. Legal Experts
- i. Experts on World Bank safeguard policies
- j. Experts in participation/culturally-appropriate consultation, outreach and communication

VI. SESA OUTPUTS

SESA will prepare the following specific reports and documents that have been finalized in close consultations with key stakeholders, including the Amerindian People and other stakeholders:

1. **Consultation and Participation Framework (CPF)**, including a Communications and Outreach Plan (Linked to Component 1(b) “REDD + Consultation and Outreach” of the Guyana R-PP);
2. **Participatory Monitoring and Evaluation Framework (PMEF)** (Linked to Component 4 of the Guyana R-PP “Design and Implementation of Monitoring, Reporting and Verification System for REDD +”);
3. **Environment and Social Management Framework (ESMF)** acceptable to the World Bank (see Annex II for details on the requirements) that will include specific sections on safeguards policies, including:
 - d) Environmental Assessment (EA) to address any potential environmental impacts as required by the World Bank Environmental Assessment Policy (OP 4.01);
 - e) Resettlement Policy Framework (RPF) to address any potential land expropriation and/or physical relocation as required by the World Bank Involuntary Resettlement Policy (OP 4.12);
 - f) Process Framework (PF) for restriction of access to natural resources as required by the World Bank Involuntary Resettlement Policy (OP 4.12), which will also include restriction of access to natural resources outside of parks and protected areas; and
 - g) Indigenous Peoples Planning Framework (IPPF) as required by the World Bank Indigenous Peoples Policy (OP 4.10).
4. **SESA Summary Report** should contain the following:
 - o key findings of the analytical and diagnostic studies; and
 - o key consultations outcomes during the SESA process and how feedback from stakeholders have been taken into account in finalizing the REDD + Strategy.
5. **Compilation** of the respective environmental, social, legal and policy reports prepared under SESA.

ANNEX I: Core Environmental and Social Sustainability Issues

The SESA will allow for the identification of key issues critical for environmental and social sustainability, which may include the following:

Stakeholder Analysis considers key stakeholders and decision makers in relation to the REDD + strategy, and provides a full accounting of both cultural diversity and gender. Stakeholder analysis allows for developing an effective public participation process of the SESA and enhance awareness of political economy considerations that are likely to influence how recommendations in the SESA are incorporated into the REDD + strategy and subsequently shape the implementation of the REDD + strategy.

Key Questions

- What are the roles, responsibilities, and interests of key stakeholders?
- Are there any vulnerable groups among the stakeholders? What is the nature and extent of their vulnerability?
- What are the gendered characteristics of forest resources use?
- What have been the patterns and trends of stakeholders' ownership and use of forest resources?
- How do the stakeholders interact (across various levels)? Where do strongest alliances lie (at the macro level)?
- Where are the most likely points of friction/conflict?

Suggested Tools (levels of analysis)

- Power analysis (macro)
- Stakeholder matrices (macro/meso/micro)
- Political mapping (macro/meso/micro)
- Vulnerability analysis (micro)

Citizen Engagement is concerned with: 1) identifying the key concerns of various stakeholder groups; and, 2) putting in place broad-based consultation and participation arrangements.

Key Questions

- What are the main constraints and opportunities for consultation with and participation by key stakeholders?
- What kinds of mechanisms for information disclosure and dissemination are most likely to work?
- Of the civil society stakeholders identified (including international NGOs), which are likely to participate in the two main phases project (e.g. Readiness Package preparation, and payment for emissions reductions)?
- How will they participate?
- What types of grievance redress mechanisms are most appropriate?

Suggested Tools (levels of analysis)

- Array of consultation events and fora organized at different levels, which can be adapted to the particular purpose of the consultation, the targeted audiences, and country characteristics.
- Micro-political mapping (meso/micro)
- PLA such as SWOT analysis (for such things as the proposed revenue sharing arrangements) (micro)

Key Environmental Issues considers key environmental and natural resources management issues in relation to the proposed strategy.

Key Questions

- What are the main goods and services provided by forests (timber, fuel wood, medicines, conservation of biological diversity, watershed protection, non-timber forests products, etc.)?
- What are the main threats affecting forests and how vulnerable are they to them?
- What are the main causes leading to forest degradation and forest fragmentation?
- What is the estimated economic value of forest goods and environmental services lost by deforestation and degradation annually?
- What are the environmental health risks like malaria, malnutrition, and others affecting forest populations, in general, and children in particular?

Suggested Tools

- Key informant interviews (from main stakeholder groups) and sector level data on exports, fuel wood consumption, etc.
- Overlapping of protected areas maps, biodiversity maps and poverty maps using GIS techniques
- Cost of degradation estimates; Annual costs of deforestation and forest degradation by main cost categories, such as morbidity, mortality and physical costs
- Epidemiological evidence and estimation of the impacts in terms of mortality, morbidity, and Disability Adjusted Life Years (DALYs)
- Case studies of selected forest areas and protected areas
- Price transfer models to look at direct and indirect effects of policy measures

Institutions and organizational capacity will assess formal and informal institutions.

Key Questions

- What types of formal and informal forest management institutions exist in the country?
- What are the customary and legal rights of access to land, forests, and related resources?
- Are incentive systems for protecting forests, biodiversity, and environmental services from forests incorporated into forest rights frameworks?
- How have beliefs, norms, and behaviors related to forest resources use interacted with environmental and socio-cultural characteristics in potential areas of activity?
- How do the proposed institutional arrangements affect aspects of efficiency and equity in the allocation of forest resources?
- What kinds of skills/capacities exist for carrying out prescribed roles and responsibilities among the various formal institutions? Where are the gaps?
- What are the human, financial, and technical capacity gaps affecting forest-dwelling and forest-dependent groups?
- What are the customary and legal rights to access to land, forests resources and biodiversity?
- What the human, financial and technical capacity gaps are in regards to forest communities?

Suggested Tools (levels of analysis)

- Organizational mapping (macro/meso)
- Participatory Learning & Action techniques (PLA)18 (micro)
- Case studies of selected forest areas and forest-dwelling communities

Impacts (Direct and Indirect) and Risks consider potential risks of the REDD + strategy.

Key Questions

- What site-specific social and environmental risks are likely to arise in the course of implementing the proposed strategy?
- Will the discrete forest conservation/deforestation avoidance activities have a negative direct or indirect impact on the environment (e.g. critical and non-critical natural habitats, non-timber forest products)

(NTFPs), wildlife, or dislocation of deforestation and degradation activities from one area to another)? If so, how can these be avoided/minimized/mitigated/managed?

- Will the discrete forest conservation/deforestation avoidance activities have a negative impact on indigenous peoples, forest-dependent groups, or any other vulnerable groups? If so, how can these be avoided/minimized/mitigated/managed?
- What specific safeguard policies are triggered?
- What are the identified needs and options for alternative livelihoods development? What opportunities, risks, and impacts are inherent in these?

Suggested Tools (levels of analysis)

- Array of participatory methods²⁰ (micro)
- Scenario analysis (macro/meso/micro)
- Gender analysis (micro)
- PLA such as SWOT analysis (for such things as the alternative livelihoods options) (micro)

ANNEX II: World Bank Safeguard Instruments

Given the potential impacts that may result from the implementation of the REDD + strategy, and based on an initial assessment, the following World Bank safeguard policies¹⁹ appear applicable at this time to the proposed REDD + operation in Guyana:²⁰

- a. Environmental Assessment (OP/BP 4.01)
- b. Natural Habitats (OP/BP 4.04)
- c. Forests (OP/BP 4.36)
- d. Physical Cultural Resources (OP/BP 4.11)
- e. Indigenous Peoples (OP/BP 4.10)
- f. Involuntary Resettlement (OP/BP 4.12)
- s. Safety of Dams (OP 4.37) (TBD)
- t. Projects on International Waterways (OP 7.50) (TBD)
- u. Projects in Disputed Areas (OP 7.60)

a. Environmental Assessment (OP/BP 4.01). The Environmental Assessment (EA) is an instrument that will examine the specific environmental issues and impacts associated with the formulation of the REDD + Strategy. It evaluates and compares the impacts against those of alternative options; assesses legal and institutional aspects relevant to the issues and impacts; and recommends broad measures to strengthen environmental management in the country as particular attention to potential cumulative impacts of multiple activities is paid to. The EA will need to include: (a) *executive summary*; (b) *policy, legal, and administrative framework*; (c) *project description*; (d) *baseline data*; (e) *environmental impacts*; and (f) *Analysis of alternatives*.

b. Natural Habitats (OP/BP 4.04). The conservation of natural habitats should take into account the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. Application of a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development is stressed.

c. Forests (OP/BP 4.36). The policy aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty, and encourage economic development. The world's forests and forest dependent people continue to experience unacceptably high rates of forest loss and degradation. The Bank is, therefore, currently finalizing a revised approach to forestry issues, in recognition of the fact that forests play an increasingly important role in poverty alleviation, economic development, and for providing local as well as global environmental services.

d. Physical Cultural Resources (OP/BP 4.11). The objective of this policy is to avoid, or mitigate, adverse impacts on cultural resources from development projects. Cultural resources are important as sources of valuable historical and scientific information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices.

e. Indigenous Peoples (OP/BP 4.10). This policy contributes to the Bank's mission of poverty reduction and sustainable development by ensuring that the development process fully respects the dignity, human rights, economies, and cultures of Indigenous Peoples. For all projects that are proposed for Bank financing and affect Indigenous Peoples, the Bank requires the borrower to engage in a process of free, prior, and informed consultation. The Bank provides project financing only where free, prior, and informed consultation

¹⁹ Readiness Safeguard Data Sheet (RSDS has been prepared to document the application of safeguard policies.

²⁰ Additional World Bank safeguard policies may be determined to be applicable to the REDD + operations during the Readiness Preparation period.

results in broad community support to the project by the affected Indigenous Peoples. Such Bank-financed projects include measures to (a) avoid potentially adverse effects on the Indigenous Peoples' communities; or (b) when avoidance is not feasible, minimize, mitigate, or compensate for such effects. Bank-financed projects are also designed to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and inter-generationally inclusive. The Indigenous Peoples Planning Framework (IPPF) consists of the following: (a) programme description; (b) potential positive and adverse effects of the programme on Indigenous Peoples; (c) a plan for carrying out the social assessment; (d) a framework for ensuring free, prior, and informed consultation with the affected Indigenous Peoples' communities at each stage of project preparation and implementation; (e) institutional arrangements (including capacity building as needed); (f) monitoring and reporting arrangements; (g) disclosure arrangements for IPPs to be prepared under the IPPF.

f. Involuntary Resettlement (OP/BP 4.12). This policy is triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts. For projects involving restriction of access, the borrower provides the Bank with a draft process framework that conforms to the relevant provisions of this policy as a condition of appraisal. In addition, during project implementation and before enforcing of the restriction, the borrower prepares a plan of action, acceptable to the Bank, describing the specific measures to be undertaken to assist the displaced persons and the arrangements for their implementation. The plan of action could take the form of a natural resources management plan prepared for the project.

g. Safety of Dams (OP/BP 4.37) (TBD). The safe operation of dams has significant social, economic, and environmental relevance. When the World Bank finances new dams, this policy requires that experienced and competent professionals design and supervise construction, and that the borrower adopts and implements dam safety measures through the project cycle. The policy also applies to existing dams where they influence the performance of a project. In this case, a dam safety assessment should be carried out and necessary additional dam safety measures implemented. OP 4.37 recommends, where appropriate, that Bank staff discuss with the borrowers any measures necessary to strengthen the institutional, legislative, and regulatory frameworks for dam safety programmes in those countries.

h. Projects on International Waterways (OP/BP 7.50) (TBD). Projects on International Waterways may affect the relations between the World Bank and its borrowers, and between riparian states. Therefore, the Bank attaches great importance to the riparians making appropriate agreements or arrangements for the entire waterway, or parts thereof, and stands ready to assist in this regard. In the absence of such agreements or arrangements, the Bank requires, as a general rule, that the prospective borrower notifies the other riparians of the project. The Policy lays down detailed procedures for the notification requirement, including the role of the Bank in affecting the notification, period of reply and the procedures in case there is an objection by one of the riparians to the project.

i. Projects in Disputed Areas (OP/BP 7.60) (TBD). Projects in Disputed Areas may affect the relations between the Bank and its borrowers, and between the claimants to the disputed area. Therefore, the Bank will only finance projects in disputed areas when either there is no objection from the other claimant to the disputed area, or when the special circumstances of the case support Bank financing, notwithstanding the objection. The policy details those special circumstances.

ANNEX III: Stakeholders to Be Consulted during the SESA Process

Some of the key stakeholders identified in Guyana so far consist of the following:

1. Government of Guyana
 - a. Office of Climate Change
 - b. Ministry of Agriculture
 - c. Ministry of Amerindian Affairs
 - d. Ministry of Finance
 - e. Guyana Geology and Mining Commission
 - f. Guyana Lands and Survey Commission
 - g. Environmental Protection Agency

2. Amerindian Institutions
 - a. National Toshaos' Council
 - b. Traditional Village Councils
 - c. Amerindian Non-Governmental Organizations

3. Donors, including
 - a. Norway
 - b. US
 - c. UK

4. International Non-Governmental Organizations, including
 - a. CI
 - b. WWF
 - c. BIC

5. Private Sector
 - a. Forest Products Association
 - b. Guyana Gold and Diamond Miners Association
 - c. Private Sector Commission of Guyana
 - d. Organizations representing small scale loggers and small scale miners

6. Civil Society Organizations (CSOs) and Academia

ANNEX IV: Required Professional Expertise

The professional expertise required for the conduct of the SESA and the required safeguards instruments will include the following.

In order to help build local capacity, national expertise (NGOs, Academia, etc.) will constitute a significant portion of the consultancy team responsible for conducting the analytical and diagnostic studies.

Furthermore, the NTC, in collaboration with the REDD Secretariat; will facilitate the consultations with the Amerindian People in order to take into account local and traditional knowledge and the community-level expertise.

1. Environmental Expertise

- a) Forestry Specialist
- b) Environmental Economist
- c) Non-Timber Forest Product Specialist
- d) Environmental Specialist with GIS expertise

2. Social Development Expertise

- a) Social scientists/Anthropologists with expertise on forests people and Indigenous Peoples and issues of restriction of access to natural resources
- b) Participatory Rural Appraisal (PRA) specialists
- c) Institutional Analysis experts
- d) Political scientists

3. Legal Expertise

- a) National Lawyer with expertise in REDD + related issues and the Guyanese laws and regulations. The Lawyer needs to be familiar with the Guyana Readiness Proposal and all related proposals and strategies, including the Low Carbon Development Strategy (LCDS) and strategies related to land, forests, mining, development and Amerindian People.
- b) International Lawyer with strong familiarity with the policies, rules and procedures pertaining to REDD + that emanate from the international negotiation process for the UN Climate Change Convention. Additionally, the lawyer should have expertise in land and natural resources law, as well as the law related to Amerindian people.

4. Consultants on World Bank Safeguards

- a) Environmental Safeguards Consultant with knowledge and experience in working with World Bank environmental safeguards as well as drafting Environmental Assessments.
- b) Social Safeguards Consultant with knowledge and experience in working with World Bank social safeguards (Indigenous Peoples and Involuntary Resettlement) as well as drafting IPPFs and Process Frameworks to address restriction of access to natural resources.

5. Communications and Outreach Expert

- a) Expert in outreach and communications.

ANNEX V: Timeline (Tentative)	YEAR 1												YEAR 2											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ACTIVITIES																								
ANALYTICAL AND CONSULTATIVE PROCESS																								
Dissemination / Feedback seeking of the draft SESA ToR	■																							
Finalization of the SESA ToR	■																							
Analytical and diagnostic studies		■	■	■	■	■	■	■	■	■	■	■												
Workshops/consultative sessions on the preliminary findings of the analytical and diagnostic studies				■				■																
Finalization of the SESA Summary Report and specific outputs										■	■													
National workshop on final findings of the analytical and diagnostic studies as well as the SESA Summary Report											■													
Assist in the disclosure of the World Bank safeguard instrument (ESMF)													■											
INPUTS TO THE REDD + STRATEGY			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

ANNEX VI: Budget**Tentative Assessment of Time Needed for Expertise**

Studies/Activities	Needed Experts	Required Time (Months)
Environmental Studies		
	Forestry Specialist	6M
	Environmental Economist	2M
	Non-Timber Forest Product Specialist	2M
	Environmental Specialist with GIS expertise	6M
Social Studies		
	Anthropologists with expertise on forests people and Indigenous Peoples	10M
	Participatory rural appraisal specialists	2M
	Institutional Analysis experts	2M
	Political Scientist	2M
Legal and Policy Review		
	International Lawyer	2M
	National Lawyer	6M
Safeguards Instruments		
	Social Safeguards Consultant	3M
	Environmental Safeguards Consultant	2M
Consultative Process		
	Communications and Outreach Specialist	5M
TOTAL*		50M

* Some of these activities will occur simultaneously.