Forest Carbon Partnership Facility (FCPF)

Readiness Preparation Proposal

(R-PP)

Country Submitting the Proposal:

Republic of Suriname

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3. Executive Summary

The Republic of Suriname has a land surface of 163,384km^2 of which 14.8 million ha is covered with forest. The forest resource of Suriname comprises approximately 90% of Suriname's land area of which a large tract is in intact condition. This represents a potentially immense material, environmental and socio-economic value, which is of importance to the Suriname economy. In a global environmental perspective these forests provide important climate beneficial services. Nationally, the forests also contribute to the regulation of the water balance, the conservation of water quality and ensuring soil fertility by resisting erosion. Suriname is a developing country at the early stage of the Forest Transition Curve. In the pursue of its development and to continue to enhance the prosperity and well-being of its people, Suriname needs to take advantage of its national resources potential, comprising of inter alia fossil fuels, fresh water, gold, bauxite, kaolin, as well as its potential for infrastructure, agriculture and tourism development. The Government of Suriname is committed to pursue a path of sustainable use and management of its natural resources. A REDD+ mechanism should be supportive of Suriname's early bridging in the Forest Transition Curve, assist in improving sustainable forest management and create positive incentives for the global climate beneficial services that emanate from the Suriname forests. Taking into account Suriname's developmental needs REDD+ should furthermore assist in reducing the threats of deforestation and forest degradation. As a High Forest cover Low Deforestation country establishing a reference emission level should take into account future trends of deforestation and degradation. Suriname has become more aware of the role of forests in climate change, since forests are both carbon sources and sinks. Influenced by Suriname's input, the door was opened in the 14th Climate Change Conference of Parties for a comprehensive approach to REDD+. Suriname now also aspires to be part of the forest carbon mechanism. Therefore, Suriname submitted the Readiness Plan Idea Note (RPIN) in December 2008, which was approved in March 2009. This furthered an increased awareness of REDD+ within governmental and non-governmental institutions, the private sector, NGOs, Indigenous and Maroon organizations, and the academia.

The Ministry of Physical Planning, Land and Forest Management, in collaboration with Tropenbos International Suriname, Conservation International Suriname and the World Wildlife Fund, conducted various presentations, training and stakeholder meetings regarding the role and importance of REDD+ activities in relation to national developmental processes to promote awareness among different stakeholders. The Government of Suriname established a National REDD+ committee to develop the Readiness Preparation Proposal. Through internal meetings and stakeholder meetings with all relevant parties, such as governmental and non-governmental institutions, the private sector, NGOs, Indigenous and Maroon organizations, and the academia, comments and recommendations were received to develop the RPP.

Quick assessments were undertaken to set out the main current and future drivers of deforestation and forest degradation. Assessments of the current drivers of deforestation and forest degradation were mainly focused on mining activities, agriculture, slash and burn activities, energy, infrastructural developments, mangrove, deforestation and forest degradation. The principal driver of deforestation and forest degradation in Suriname in recent years has been mining, including large, medium and small scale mining for bauxite and gold. A quick assessment was also carried out on the capacity of (governmental) institutions with respect to the implementation of the RPP and the REDD+ readiness strategy. It became evident that most governmental institutions will require capacity building and institutional

strengthening to increase their knowledge about REDD+ and the implementation of the RPP. External expertise as well as substantial financial resources will also be needed for the implementation of the RPP and REDD+ readiness strategy. Suriname aims for the development of a national REDD+ strategy. The main activities are coordination, capacity building, financial carbon market access, financial mechanism development, research and education, stakeholder engagement, dissemination of information and baseline establishment, monitoring, reporting and verification. The output of these activities will be the development of a national REDD+ framework and its strategies, the development of the reference scenario and design of a monitoring system. To conduct all activities with respect to the implementation of the RPP and REDD+ readiness strategy, a National REDD+ Working Group will be established consisting of representatives of governmental institutions, the forest dependent communities namely the Indigenous and Maroon people, the timber industry, academia, civil society and some observers (other relevant non-governmental organizations). The overall task of the National REDD+ Working Group will be to coordinate and supervise all activities conducted by the National Forest Carbon Unit, which will operate under supervision of the National REDD+ Working Group and will also be coordinated by the Ministry of Physical Planning, Land and Forest Management. To succeed in the implementation of the RPP and REDD+ readiness strategy, implementation of the consultation and outreach plan is considered of eminent importance in order to engage the entire community in the process of implementation. Both governmental and traditional structures will be considered for consultation and outreach. Implementation of Suriname's RPP will require a lot of collaboration, technical and financial resources as well as technology. The estimated budget is **U$D21,250,000.00** for the implementation of both the RPP and REDD+ readiness strategy for a period of four years. Suriname strongly believes that the implementation of the RPP and REDD+ readiness strategy will lead to the development of a solid basis which will enable the country to be ready for the post-Kyoto arrangements. The World Bank/ FCPF is uniquely positioned to catalyze Suriname's REDD+ Readiness and to assist Suriname with these goals, which would complement the FCPF vision of partnership.

List of acronyms

ACTO	Amazon Cooperation Treaty Organization
ADEKUvS	Anton de Kom University of Suriname
ADRON	Anne van Dijk Rijstonderzoek Centrum Nickerie
AFOLU	Agriculture, Forestry and Sustainable Land Use
ASHU	General Suriname Timber Union
ATBC	Association of Tropical Biology and Conservation
ATM	Ministry of Labor, Technological Development and Environment
CABPRES	Cabinet of the President of the Republic of Suriname
CBO	Community Based Organization
CELOS	Centre for Agricultural Research in Suriname
CI	Conservation International
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CIVILSoc	Civil society
CLI	Country-Led Initiative
CSNR	Central Suriname Nature Reserve
DEF	Ministry of Defense
DLGP	Decentralization Local Government Strengthening Programme
ESIA	Environmental and social impact assessments
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FIN	Ministry of Finance
FTAA	Free Trade Area of the Americas
GIS	Geographic information systems
GLIS	Land registration and Land information system
HI	Ministry of Trade and Industry
I&Mcomm	Indigenous and Maroon communities
ICFRE	Indian Council on Forestry Research and Education
IDB	Inter-American Development Bank
IIRSA	Integration of Regional Infrastructure in South America
IOL	Institute for Teacher Education
IPCC	Intergovernmental Panel on Climate Change
IRD	Institut de Recherche pour le Developpement
ITTC	International Tropical Timber Council
ITTO	International Tropical Timber Organization
JSOOC	Jan Starke Training and Recreation Centre
KKF	Chamber of Commerce and Industry
LBB	Forest Service
LVV	Ministry of Agriculture, Animal Husbandry and Fisheries
M&E	Monitoring and Evaluation
MADP MOP	Multi Annual Development Plan
MRV	Monitoring, reporting and verification

MUMA	Multiple-Use Management Area
MW	Megawatt
NARENA	Department of Natural Resources and Environmental Assessment
NATIN	Nature Technical Institute
NB	Nature Conservation Division
NBS	National Biodiversity Strategy
NFCU	National Forest Carbon Unit
NGO	Non governmental organization
NIMOS	National Environmental Council and the National Institute for Environment and Development in Suriname
NRWG	National REDD+ Working Group
Obs	Observers
OIS	Organization of Indigenous People in Suriname
OW	Ministry of Public Works
PHS	Platform Timber Sector
PLOS	Ministry of Planning and Development
REDD	Reduced Emissions from Deforestation and Degradation
REL	Reference Emission Level
RGB	Ministry of Physical Planning, Land and Forest Management
RO	Ministry of Regional Development
RPIN	Readiness Plan Idea Note
SBB	Foundation for Forest Management and Production Control
SIVAM	Sistema de Vigilância de Amazônia
TBI	Tropenbos International
TEAM	Tropical Ecology, Assessment and Monitoring
TOR	Terms of reference
UNFCC	United Nations Framework Conventions on Climate Change
UNFF	United Nations Forum on Forests
VIDS	The Association of Village Leaders of Suriname
VSG	The Association of Saramaka Authorities
WWF	World Wildlife Fund

Component 1: Organize and Consult

1a. National Readiness Management Arrangements

Rationale

From 8th – 12th September 2008, Suriname hosted the international experts meeting on "Financing for Sustainable Forest Management: The Paramaribo Dialogue", which was a Country-Led Initiative (CLI) in support of the United Nations Forum on Forests (UNFF). The objective of the Paramaribo Dialogue was to identify opportunities to significantly enhance financing for sustainable forest management. The meeting brought together finance and forest experts from around the world, who shared experiences with regards to mobilizing forest funding and generating revenues, existing and emerging public and private financing sources, the relationship between forest financing and forest-related governance and enabling environments for investment. The meeting also explored models, strategies and institutional arrangements for increased financing through such means like bilateral and multilateral public funding mechanisms, debt reduction, payments for ecosystem services (such as water and carbon), private sector commercial investment and private philanthropy. The meeting was attended by 227 participants, including international experts from all regions of the world, representatives from the Republic of Suriname, as well as representatives from regional and international organizations, non-governmental organizations, private sector, philanthropic organizations and major group organizations (Country-Led Initiative Summary report, 2008). In preparation of this CLI, the Government of Suriname, in collaboration with Tropenbos International Suriname and the Ministry of Agriculture, Nature and Food Quality Netherlands, commissioned a Rapid Assessment Report of Existing Financial Mechanisms for Sustainable Forest Management, in January 2008. The findings of this study in which a complete mapping of existing national mechanisms (public and private) has been outlined, was presented at the CLI.

After Suriname's RPIN was approved in February 2009, the Ministry of Physical Planning, Land and Forest Management in collaboration with Conservation International Suriname, World Wildlife Fund Guianas and Tropenbos International Suriname, initiated a series of Workshops, which focused on Reduced Emissions from Deforestation and Degradation (REDD+), the climate change negotiations and opportunities for Highly Forested and Low Deforestation (HFLD) countries. Presentations for policymakers and the general public were held by Dr. Jagdish Kishwan, Director General Indian Council on Forestry Research and Education (ICFRE), by Ir. Bas Clabbers, REDD+ Senior Negotiator of the European Union, respectively on *'REDD+ Negotiations: The case of HFLD Countries' and 'The European Union (EU) vision on REDD+ & HFLD Countries'*, by Benjamin Vitale of Conservation International and Ralph Ashton of the Terrestrial Carbon Group on respectively, '*REDD+ Readiness Planning* and *REDD+ in the Global Climate Change Context: Implications for Suriname'*. The meetings were attended by various participants from governmental and non-governmental organizations, Maroon and Indigenous organizations, the private sector and civil society.

With respect to capacity building for technical cadre of governmental institutions, the Anton de Kom University of Suriname, non-governmental institutions and representatives of Indigenous and Maroon organizations, Conservation International supported the Government of Suriname in providing the training course *"Forest Carbon Project Development* and *REDD+ Readiness for the R-PLAN Development"* from 25th -29thMay 2009. About 42 participants took part in the *Forest Carbon Project Development* training, and 22 participants were selected for the *REDD+ Readiness Planning Workshop*. An important result of these activities was the establishment of a National REDD+ Committee with the aim to develop the RPP. In another government-initiated activity, a staff member of Conservation International held a presentation on the RPP for the National REDD+ Committee, with emphasis on components 1a and 1b.

From the 12th –14th of August 2009, Conservation International Suriname organized a training workshop for Indigenous and Maroon community leaders. Participants were representatives of all maroon traditional authority structures, the Trio tribal authority of South Suriname, the Association of Village Leaders of Suriname (VIDS), the Association of Saramaka Authorities (VSG), as well as representatives of the Organization of Indigenous People in Suriname (OIS) and the Foundation Meu, which is the local development organization from the Trio community of Kwamalasamutu. This workshop was facilitated by a Surinamese NGO, i.e. Projekta Foundation, which has expertise in developing training materials and training communities in civil action. This NGO had participated in the *Forest Carbon Project Development* training in May. During this workshop, the Ministry of Physical Planning, Land- and Forest Management (RGB) did a presentation on the RPP with emphasis on components 1a and 1b.

As a result of all of the above-mentioned activities, an increased knowledge and awareness of REDD+ issues has become apparent, among governmental institutions, the Anton de Kom University of Suriname and other technical institutions, stakeholders, Indigenous and Maroon organizations, timber companies, and civil society organizations.

Summarize the National Readiness Management Arrangements

The main task of the present National REDD+ Committee, coordinated by the Ministry of Physical Planning, Land and Forest Management(RGB), is to develop Suriname's RPP. The National REDD+ Committee consists of representatives of a wide variety of Ministries (Physical Planning, Land and Forest Management, (RGB); Labor, Technological Development and Environment, (ATM); Natural Resources, (NH); Agriculture, Animal Husbandry and Fisheries, (LVV); Finance(FIN); Regional Development, (RO); Public Works, (OW); Planning and Development Cooperation, (PLOS), the Cabinet of the President of the Republic of Suriname,(CABPRES) the Foundation for Forest Management and Production Control (SBB) and two observers (i.e. Conservation International Suriname and Tropenbos International Suriname).

The current National REDD+ Committee will be transformed and expanded into the National REDD+ Working Group (NRWG), which will consist of one representative of each of the following entities :

The Government:

1. **The Ministry of Physical Planning, Land and Forest Management (RGB)**. This Ministry will coordinate both the National REDD+ Working Group and the National Forest Carbon Unit. The role of this ministry is to ensure the full implementation of the RPP and REDD+, thereby taking

into consideration the National Forest Policy and other related policies.

2. **The Ministry of Labor, Technological Development and Environment (ATM)**. The specific role of this ministry is to support the implementation of the REDD+ readiness strategy in accordance with the national environmental policy.
3. **The Ministry of Regional Development (RO)**. The role of this ministry is to assist and to guide the consultation and participation activities to all forest dependent groups, in particular forest-dependent communities and Indigenous and Maroon communities. The aim is that these groups are informed and effectively consulted regarding the implementation of the RPP and the REDD+ readiness strategy considering the governmental and traditional structures. The Ministry of RO is the government ministry in charge of consultation and participation with indigenous and maroons communities as well as the forest communities.
4. **The Ministry of Finance (FIN).** The role of this ministry is to assist the NWRG with the implementation of the REDD+ readiness strategy, with a focus on benefit sharing mechanisms, forest carbon market analyses, financial management systems and incentives, while taking into account all other financial issues regarding REDD+.
5. **The Ministry of Planning and Development Cooperation (PLOS)**. The role of this ministry is to monitor and support the implementation of the RPP and the REDD+ readiness strategy, as well as to ensure the harmonization of the RPP and REDD+ activities with the Multi Annual Development Plan (MOP), Suriname Green Vision and international (economic) development cooperation.
6. **The Ministry of Natural Resources (NH).** The role of this ministry is to ensure a thorough assessment of existing and future drivers of deforestation and forest degradation, including mining and energy production activities. The development of adequate monitoring systems and/or the upgrading of existing monitoring schemes used in the mining sector will be taken into account.
7. **The Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)**. The main focus of this ministry is to ensure a thorough assessment of existing and future drivers of deforestation and forest degradation, with due respect for land use changes and (new) agricultural activities, which may have an impact on the implementation of REDD+. The development of adequate monitoring systems and/or the upgrading of existing monitoring schemes used in the agricultural sector will be taken into account.
8. **The Ministry of Public Works (OW).** The role of this ministry is to keep the NWRG informed of all infrastructural activities that may have an impact on the implementation of the REDD+ readiness strategy, such as the improvement of existing infrastructure, as well as new infrastructural works (roads, bridges, dikes and other infrastructure).
9. **The Cabinet of the President(CABPRES)**. The role of the Cabinet of the President is to ensure a coordinated implementation of the RPP and the REDD+ readiness strategy within the context of the environmental commitments of the Government of Suriname

The governmental institutions:

1. **The Foundation for Forest Management and Production Control (SBB).** The role of the Foundation for Forest Management and Production Control (SBB) is to assist the Ministry of Physical Planning, Land- and Forest Management (RGB) with the implementation of the RPP and REDD+ readiness strategy as well as to be part of the forest carbon accounting system and MRV.
2. **The National Institute or Environment and Development in Suriname (NIMOS).** The role of NIMOS is to ensure that the environmental and social impact assessment guidelines are being developed and executed considering the World Bank safeguard policies, national environmental policies and national ESIA guidelines.

The private sector

1. **The forest sector including the General Surinam Wood Union** (Sawmill owners) (Algemene Surinaamse Hout Unie) and t**he Platform Timber Sector** (Platform Hout Sector).
2. **The mining sector**
3. **The agricultural sector**

Because of their importance for REDD+, representatives of these sectors are included in the NRWG.
The role of abovementioned representatives is to look after the interests of the actors in these sectors and to ensure that the implementation of the RPP and REDD+ are in line with the Consultation and Participation activities as well as with sustainable forest management.

The community

1. **The forest-dependent communities namely the Indigenous and the Maroon communities.**
2. **Civil society.**

The role of abovementioned representatives is to ensure continuous involvement with the communities and ascertain feedback from the people whom they represent. Furthermore they ensure that the implementation of the RPP and REDD+ are in line with the results of the Consultation and Participation activities.

Academia

1. The Anton de Kom University of Suriname.
2. Related research institutions such as CELOS.

The role of abovementioned representatives is to ensure that research activities are properly conducted and that, where possible, all research institutions represented are indeed engaged. The representatives will furthermore encourage the inclusion of REDD+ issues in the curricula of academic institutions. The abovementioned stakeholders will choose their representatives through internal consultations.

The National REDD+ Working Group

The NRWG is the coordinating body responsible for the implementation of the RPP and REDD+ in Suriname. Because of cross-sectoral engagement on REDD+ related issues and the need for strong collaboration the NRWG will consist of representatives of governmental institutions, the private sector, civil society, the local communities and academia. Through past experiences such as the implementation of the forest management system and national forest policies, as well as, the present experience from stakeholders meetings regarding the development of the RPP, it is apparent that all relevant stakeholders must be included.

With the establishment of the NRWG all relevant parties will be involved in the planning, development and implementation of the RPP and the REDD+ readiness strategy, as a result of which, REDD+ will be integrated into the national development policies at an early stage. The NRWG can at all times admit observers to its meetings and other activities or work in close collaboration with other relevant institutions as the need arises. These observers can provide crucial technical assistance and expertise to both the NRWG and the National Forest Carbon Unit (NFCU). During the first phase, the NRWG will be placed under the Ministry of RGB, which will guard, monitor and evaluate the execution of the roles and responsibilities of respective stakeholders, as well as, the RPP budget and REDD+. After evaluation of the first phase, the structure will be adjusted as needed.

The overall task of the NRWG is to coordinate all activities conducted by the National Forest Carbon Unit, focusing on the following:

a. The implementation of activities of the RPP, in particular with regard to the TORs and the REDD+ readiness strategy;
b. REDD+ readiness activities with special emphasis on consultation and outreach, dissemination of information on REDD+ issues and the REDD+ readiness strategy;
c. The benefit sharing mechanism for carbon revenues;
d. The commissioning of research studies for the development of regulations for forest carbon ownership;
e. The development, implementation and evaluation of policies, strategies and methodologies;
f. The development and implementation of technical national programs for training and awareness regarding the implementation of the RPP and the REDD+ Readiness strategy;
g. Assessments of the national REDD+ readiness strategies and framework, as well as the forest carbon stocks, carbon accounting, market analysis, financial developments/ mechanisms/ incentives and the scenarios; and
h. To monitor and evaluate activities conducted by the National Forest Carbon Unit.

The operational guidelines to come to the execution of abovementioned tasks will be developed through stakeholders meetings. Therefore, all relevant stakeholders can agree upon the feasibility and reliability. The NRWG will execute its activities through regular meetings and intensive communication to ensure maximum inputs and outputs from all relevant stakeholders to implement the RPP and REDD+ readiness activities. The expected output of the activities of the National REDD+ Working Group are:

- A consultation and participation plan is developed, with due consideration for the key aspects described in component 2b;
- The national REDD+ readiness strategy and framework is developed;
- The national forest carbon accounting system is developed and implemented;
- The monitoring, reporting and verification system is developed for the National REDD+ Working Group to evaluate the implementation of the RPP and REDD+ readiness strategy activities;
- REDD+ readiness strategy is incorporated in the MADP 2011- 2016 (MOP 2011 - 2016) and mainstreamed in all relevant national policies;
- The RPP and REDD+ readiness strategy implementation activities are analyzed;
- REDD+ readiness activities are developed and implemented with special emphasis on consultation and participation, dissemination of information including on an agreed upon a feedback system
- The RPP and REDD+ readiness strategy implementation results are recorded and stored in a database;
- A benefit sharing mechanism for carbon revenues is developed;
- Studies regarding forest carbon ownership are completed and the implementation phase is initiated.

The NRWG will have a coordinated secretariat. The role of this secretariat is to administer and monitor the work of NFCU in accordance with the instructions of the NRWG and keep the members of NRWG informed on a weekly basis. The secretariat will service the meetings of the NRWG and will disseminate all information to the unit transparently. The secretariat will also ensure that all information is disseminated to all NRWG members and that the members of the NCFU and subunits are informed. Therefore, the NRWG will have a better view of the activities of the NFCU. Each quarter a report of these meetings will be disseminated to all relevant stakeholders as well as interested institutions and stakeholders who are not a member of the NRWG.

To ensure full collaboration of all stakeholders, subunits will be established on the basis of REDD+ issues that need to be discussed and are necessary for all relevant sectors, stakeholders, institutions. The

meetings of the subunits have the character of a general sitting where all relevant parties and stakeholders related to REDD+ have the opportunity to participate, share information and give feedback on issues regarding the implementation of the RPP and REDD+. The role of these subunits is to gain more room for all relevant stakeholders for in-depth discussions on the RPP and REDD+. These discussions will generate the views that are to be pronounced in the NRGW meetings by the assigned NRWG member. Meetings will be held at least once every two months but as often as deemed necessary by participants. Subunits will ensure the realization of a bottom-up approach and full participation of all stakeholders.

A program implementation unit will be established called the NFCU. The role of the National Forest Carbon Unit (NFCU) is to implement all the activities of the RPP in order to reach optimal output. It will operate under supervision of the National REDD+ Working Group. All activities will be monitored and evaluated by an independent monitoring committee.

The National Forest Carbon Unit will be divided into three departments:

1. The **administrative department**, which will be responsible for all administrative work with regards to the implementation of the RPP and REDD+ readiness strategy. Key tasks are:
    a. receive, disseminate, handle and keep all information, letters, newsletters regarding implementation of the RPP and REDD+ readiness strategy up to date and general REDD+ up to date;
    b. maintain close contact with the National REDD+ Working Group and relevant stakeholders on the implementation of the activities;
    c. develop and maintain the National REDD+ Databank;
    d. assist in the organization of activities to be implemented by the National Forest Carbon Unit in execution of the RPP and REDD+ readiness strategy.

2. The **technical department,** which will aim at managing all technical issues with respect to the implementation of the RPP and REDD+ readiness strategy. Key tasks are:
    a. receive, disseminate, handle and keep all technical information, letters, newsletters regarding the implementation of the RPP and REDD+ readiness strategy up to date;
    b. maintain close relations with the National REDD+ Working Group and all relevant stakeholders in the implementation of the RPP and REDD+ readiness strategy to actualize an effective two-way communication;
    c. develop a framework for the establishment of reference levels;
    d. develop guidelines for MRV mechanism;
    e. develop awareness material for dissemination;
    f. develop training programs and time schedules for training sessions, meetings and workshops on (technical) issues regarding the implementation of the RPP and REDD+ readiness strategy;
    g. conduct training sessions, meetings and workshops with a focus on capacity building of (governmental) institutions and relevant stakeholders, in collaboration with national and international experts.

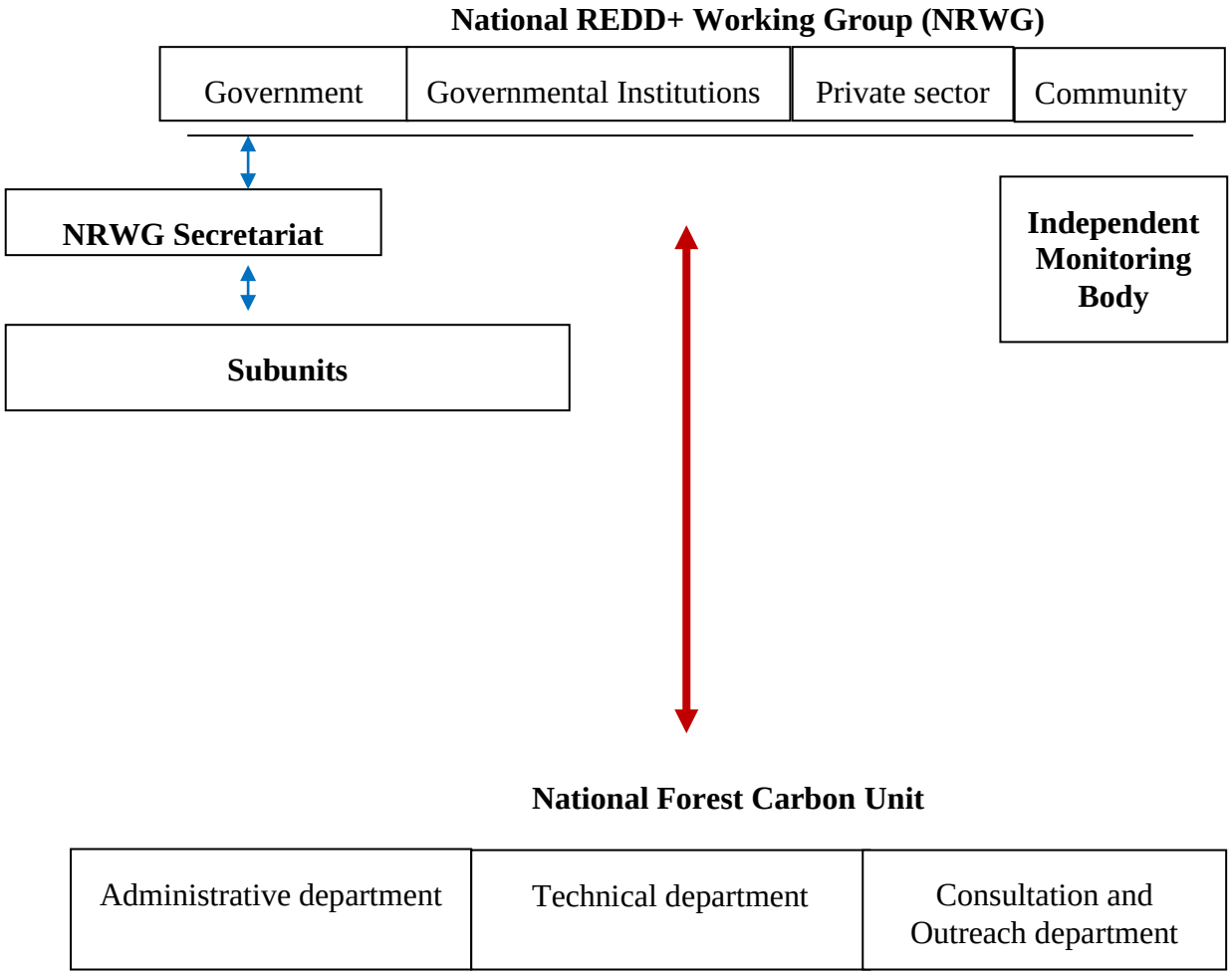
3. A **consultation and outreach department**, which will work in close collaboration with the administrative and technical departments to organize and manage consultation meetings in accordance with the consultation and outreach plan, as well as disseminate information and materials. The work consists of the development and implementation of training programs, time schedules for training and meetings and workshops. It includes also information for awareness and education on issues regarding the implementation of the RPP and REDD+ readiness strategy

as well as receiving and considering feedback from the community which needs to be taken into account in the RPP and REDD+ process to actualize a two-way communication. The main focus will be on the general public as well as on specific target groups, such as the forest-dependent communities in particular the Indigenous and Maroon communities. The NFCU will work in close collaboration with the Ministry of Regional Development regarding the consultation and participation.

Meetings between the NRWG and the NFCU will be held once per month within the years of the RPP implementation. Twice per year a RPP Assembly will be held to come to full collaboration and receiving feedback from the NRWG, NFCU and subunits. This serves to increase transparency and compatibility. The meeting will be open to all interested parties.

All activities of the RPP need to be monitored and evaluated. This will be done through an independent monitoring body. The Planning Office is the national monitoring body of the MADP. Since the RPP and REDD+ are incorporated in the MADP and mainstreamed in national policies, the Planning Office will be the independent monitoring body for implementation of each component of the RPP and REDD+.

The following organization chart shows the relationship between the National REDD+ Working Group, the National Forest Carbon Unit and the relevant stakeholders:



Schedule and sequencing of activities

Activities	Year 1	Year 2	Year 3	Year 4
Establishment of the National REDD+ Working Group, the National Forest Carbon Unit, the Subunits and the Independent monitoring body	x			
Gathering information on REDD+ issues and establishing a databank	x	x	x	x
Formulation of a national REDD+ policy	x	x	x	x
Mainstreaming of REDD+ issues into the MOP and national policy	x	x	x	x
Development of training programs and time schedules for training, meetings and workshops regarding technical issues of implementation of	x	x	x	

RPP and REDD+ readiness strategy				
Dissemination of information	x	x	x	x
Monitoring and recordkeeping of all results and data	x	x	x	x
Coordination of consultation and participation plan	x	x	x	x

Implementation of these activities will require support for program funding and technical assistance, as well as knowledge sharing, capacity building and research. The Ministry of Physical Planning, Land and Forest Management (RGB) has built a good relationship with international and national organizations, which are focusing on sustainable forest management and REDD+ and will continue this collaboration in seeking assistance in funding and capacity building for research and the implementation of the RPP and REDD+ readiness strategy.

Table 1 A: Summary of National Readiness Management Arrangements Budget

Main activity	Sub- Activity	**Estimated Cost in U$D (in thousands)**				
		2010	2011	2012	2013	**Total**
Establishment of a National REDD+ Working Group (NRWG) and NFCU	Establishment of the unit: rent	20.00	20.00	20.00	20.00	**80.00**
	Establishment of the unit: logistics and furniture	300.00				**300.00**
	Establishment of the unit: utilities	20.00	20.00	20.00	20.00	
	Administrative personnel, NRWG	75.00	75.00	75.00	75.00	**300.00**
	Personal for the NFCU (1 national officer, 2 technical officers, 2 administration officers)	150.00	150.00	150.00	150.00	**600.00**
	Formulate REDD+ policy	15.00				**30.00**
Subunits	Meetings with all relevant stakeholders	15.00	15.00	15.00	15.00	**60.00**
Subtotal		**595.00**	**280.00**	**280.00**	**280.00**	**1,370.00**
	Development of a mechanism to gather all information regarding REDD+ and update of the databank	8.00	5.00	5.00	5.00	**23.00**
	Development of a mechanism to disseminate all information regarding REDD+	6.00	6.00	6.00	6.00	**24.00**
	Establishment of the REDD+ Consultation and Outreach Committee and conducting activities	30.00	10.00	10.00	10.00	**60.00**
Monitoring by the independent monitoring body		50.00	50.00	50.00	50.00	**200.00**
Subtotal		**94.00**	**71.00**	**71.00**	**71.00**	**307.00**
Grandtotal		**$689.00**	**$351.00**	**$351.00**	**$351.00**	**$1,677.00**

1a						

1b. Stakeholder Consultation and Participation

Rationale

The aim of consultation and participation is to make the entire Suriname community aware and to provide opportunities for their views, opinions and other inputs on REDD+, as well as to provide for their active role in the implementation of the RPP and the design of the REDD+ readiness strategy. Awareness will be created through training, seminars, workshops, as well as the dissemination of technical and non-technical papers, articles in local newspapers, web pages and TV/radio programs and presentations

Consultation and participation of the people of Suriname is important in the implementation of the RPP and REDD+ strategy. The governmental structures, civil society structures, as well as traditional structures of the forest-dependent people will be used to achieve active engagement. This is described below in the paragraph on consultation and participation.

The aim of communication is to disseminate information about the activities of the RPP and the implementation of REDD+ issues to the Suriname community in such a way, that the information is easily accessible and understood by everyone, so as to provide better understanding of the process. Only then will people be able to contribute to the readiness strategy design. Existing means of communication, such as national, district and community TV, radio and newspapers will be used to disseminate information in national, local and traditional languages. Where villages have none of these communication media available, awareness meetings will be held.

Suriname has held large multiple stakeholder consultations in the past, for example, during the preparation and formulation of the MADP, the National Forest Policy, National Biodiversity Strategy and Climate Change Action Plan. Various national, regional, and local workshops, training and seminars have also been conducted. However, there have been concerns by Indigenous and Maroon organizations that the consultation processes did not sufficiently take into account their traditional methods of meeting or their traditional structures for consultations To come to an effective consultation and participation plan, the lessons learned from previous stakeholder meetings have been taken into account, such as planning more time for the engagement process and adequate budgets to ensure better involvement of Indigenous and Maroon communities.

Therefore, the Ministry of Regional Development will assist with the consultation and participation meetings through governmental and traditional structures. The consultation method that will be used is described in point 6 in the box beneath. FPIC principles will be reviewed and used as a basis for the development of the FPIC guidelines taking into account the national circumstances.

The consultations to be held regarding REDD+ development will focus on the following important issues:

- the national REDD+ readiness strategy,

- the REDD+ implementation framework,
- the methodology for the development of a reference scenario,
- the monitoring, reporting and verification (MRV) activities,
- the environmental and social assessments and its mitigation,
- the economic effects and applicable mitigation.
- the methodology for the development of the national forest carbon accounting system as well.
- the development of MADP will take into account the incorporation of REDD+ when conducting their consultation process;
- the benefit sharing mechanism

All abovementioned issues need to be explained at the level of understanding of all participants and in a language that ensures a good understanding. The views and feedback from consultation meetings are important for the further planning and development of REDD+ activities.

Consultations held so far in the development of the R-PP

In order to develop an effective stakeholder consultation and participation plan, stakeholder meetings were organized with participants from ministries, the district commissioners' offices, Indigenous and Maroon organizations, and non-governmental organizations. Stakeholder meetings were held on July 6th, July 31st, and August 17th 2009. During these meetings, the components of the RPP were presented. The comments and recommendations given by the representatives of Indigenous and Maroon organizations, the district commissioners, government and non-governmental organizations are summarized below:

1. *'More awareness is needed about REDD+ readiness strategy';*
2. *'The dissemination of information is important. Who provides the information is also important';*
3. *'Much time is needed for consultation meetings in order to ensure a good understanding of the REDD+ readiness strategy';*
4. *'Sufficient time must be planned for internal consultations within the Indigenous and Maroon villages';*
5. *'Any effective and efficient consultation model must be based on the principle of FPIC';*
6. *'The national and local languages must be used during consultations and in education and awareness programs to ensure a full understanding';*
7. *'All information must be sent to the organizations and representatives of traditional authorities in hard copies in a language that they can understand';*
8. *'The land rights of Indigenous and Maroon communities must be taken into account'.*

The meetings provided a clear view on issues to be taken into account to develop the RPP, and on issues regarding the development of an effective and efficient Consultation and Participation Plan. Annex 1b gives the reports of the stakeholder meetings.

Full Consultation and Participation Plan

Consultation and Participation Plan:

In accordance with component 1a, the NRWG will develop the consultation and participation plan together with the National Forest Carbon Unit.

The objective of the Consultation and Participation Plan is to engage the people of Suriname in the planning, implementation, monitoring and evaluation of the future REDD+ readiness strategy and to ensure continuous feedback. All relevant stakeholders will be part of the design and implementation of the REDD+ readiness strategy. This is a key element to ensure the successful design and future implementation of the REDD+ readiness strategy. To develop the consultation and participation plan, due consideration will be given to the following:

1. Much experience was gained from large multiple stakeholder consultations in the past years (e.g. during the formulation of the MADP, National Forest Policy, National Biodiversity Strategy, Climate Change Action Plan) at successful national, regional, and local workshops, trainings and seminars. The process for REDD+ will most likely follow similar processes, taking into account the lessons learned during the consultations, as well as recommendations of previous stakeholder meetings regarding the consultation and participation plan. For example, most meetings in the past have been held only in the city and there was no opportunity to get feedback from the chiefs or communities. The Consultation and Participation Plan will therefore take into account the need for sufficient time and resources.

2. For all consultation meetings and the dissemination of information, the use of relevant local languages must be taken into account. Consultations and awareness activities need to take into account the different languages spoken in the city of Paramaribo, the districts, and among the tribal and Indigenous communities. Therefore, besides Dutch (the official language) and Sranan Tongo (the lingua franca of the country), due account will be given to the use of Javanese, Sarnami, Saamaka, Auka, Matawai, Arowaks, Caraib and Trio, among other languages.

3. As far as the forested area of the country is concerned, besides the government, many non-governmental organizations in Suriname, such as CI Suriname, WWF, ACT Suriname, SCF and the 'Binnenlandoverleg' (a network of local non-governmental organizations that work in the interior), work with forest dependent people, Indigenous and Maroon communities, as well as relevant women and youth organizations. The experience of these organizations' and lessons learned from their meetings will also be taken into account. Therefore, relevant organizations will be engaged to advise the NRWG and NFCU for the development and implementation of the consultation and participation plan.

4. Awareness workshops and training will be conducted for all interested parties to enhance and inform participation in the national discussion. An education and awareness program will furthermore ensure that local media are trained to more easily disseminate information to the target groups. As a result, there will be a better understanding of the implementation of the RPP and the REDD+ readiness strategy, while the information can then be disseminated more easily to the respective tribal authorities, thus strengthening the consultation meetings.

5. The need for capacity building and institutional strengthening will be identified for relevant groups and communities. An assessment will be conducted for the capacity of villagers and their relevant organizations, to develop a relevant capacity building and institutional strengthening program. This will lead into the engagement of the local villagers for planning, executing and monitoring the implementation of the RPP and the national REDD+ strategies.

6. The Consultation and Participation Plan will take into account both the structure of the government and the traditional authority structures of the Indigenous and Maroon communities of the interior.

a. With regard to the structure of the government, the Ministry of Regional Development and its institutional structures i.e. the district commissioners (DC), the sub-regional coordinators and the administrative officers will play an important role in the implementation of the consultation and awareness activities, in liaising with the forest dependent communities, Indigenous and Maroon communities, and civil society groups, as well as in disseminating information. For this purpose, existing governmental and traditional structures for communication will be utilized. According to the law, the district commissioners must be informed about activities that will take place in the respective districts. The district commissioner governs the district and is assisted by the sub-regional coordinators and administration officers. The district commissioners have the responsibility to oversee that activities are properly implemented and that all relevant stakeholders, Indigenous and Maroon communities are involved and informed. The district commissioners, together with the sub-regional coordinators and administrative officers of the districts, will therefore provide assistance in setting up, implementing and facilitating the consultations and participation meetings.

b. With regard to the structures of the traditional authority, the chiefs or captains of the Indigenous and Maroon villages play a crucial role. The chiefs or captains must be informed in depth about everything before they can take the responsibility to pass on information to their communities, and before they can decide to be part of any participatory process to formulate the RPP and REDD+ readiness strategy. In a training workshop on REDD+, organized by CI Suriname for key Indigenous and Maroon community representatives (12^{th}–14^{th} August 2009), participants discussed what they thought was an ideal consultation and participation plan for Indigenous and Maroon peoples of the interior. It is self-evident that this consultation process is extremely costly and time consuming, but it does provide continuous information and participation:

   i. First, convene a conference with representatives of all traditional Indigenous and Maroon authorities, and Indigenous and Maroon organizations such as the Association of Indigenous Village Leaders of Suriname (VIDS) and the Association of Saramaka Authorities (VSG) and representatives of other local Indigenous and Maroon organizations, such as women's organizations, youth organizations and development organizations. These local organizations play an important role to support the villagers and to monitor what is being done. In this conference, the Government can present the proposed RPP and REDD+ readiness strategy for discussion. It is also important that the advantages and disadvantages of the strategy are discussed openly.

   ii. After this conference, the representatives will go back to the respective chiefs or captains to present the information. Discussions will then be conducted within each of the Indigenous or tribal groups through their own traditional internal structures (i.e Saramaka, Auka, Patamaka, Matawai, Kwinti, Wayana and Trio separately, while VIDS will be able to provide this information and hold discussions with other Indigenous village communities through their existing regional structures).

   iii. A second conference will be held, where all the representatives of the traditional Indigenous and Maroon authorities and organizations meet again to present and discuss the points of view of their respective tribal groups and discuss with the Government. If possible, an agreement might then be reached with the Government structures on the RPP and REDD+ readiness strategy. If not, individual meetings between the Government and the different tribal chiefs or captains will be required in separate traditional *krutu* (meetings) before agreement can be reached.

   iv. The above steps will be repeated to ensure that communities are informed about the progress of the activities. Through this consultation method, decisions and actions will be developed with consideration of generous time for internal consultations, translations and traditional structures to express the indigenous and maroon communities' opinions to the

NRWG. To consider this, a time schedule will be developed with representatives of the communities and relevant stakeholders.

v. An independent monitoring body will monitor and report on all issues regarding consultation and participation meetings including the incorporation of the outputs of these meetings.

c. The principles of FPIC will be used as the basis for the development of FPIC guidelines taking into account the national circumstances.

7. Suriname consists of ten districts with an estimated total of 234 Indigenous and Maroon villages (General Bureau of Statistics, 2008, annex 1b-2), spread over nearly the entire Suriname territory. Most of these villages can only be reached by river or by air. Therefore, the relevant method of transportation must also be taken into account when meetings are held in either the city or the villages namely:
   a. transport by car (usually four-wheel drive vehicles) whenever the villages are accessible by road;
   b. transport by boat and
   c. transport by airplane.
   d. combination of all three (a, b and c)

   Transportation by boat is entirely in the hands of the local communities in the interior.

8. The NFCU will distribute information through the relevant governmental and traditional structures, namely the official representatives of the Indigenous and Maroon communities. The tribal chiefs or captains of the villages will also evaluate, inform and improve the consultation process, taking into account their traditional structures. Through existing communications, media, the Government and local structures in close contact will remain with the official representatives of the chiefs or captains and representatives of the Indigenous and Maroon organizations.

9. Local and community radio stations will play an important role in the dissemination of information to local communities. The telecommunications companies have also improved their capacity to reach the interior of Suriname with telephone services, and hopefully in the near future also with internet services. The advantage of these developments is that local villagers now can receive information or announcements in a more accessible manner through local radio stations and communicate with other villages, as well as with the capital. The National REDD+ Working Group will make sure that available technology is utilized when consultations take place.

10. Consultations will focus on the relevant national policies, regulations, programs and their current status as well as the REDD+ readiness strategy and the REDD+ Implementation framework. Important issues of REDD+ and its national and international developments, will also be discussed at the consultation meetings.

11. Dissemination and access of information. One of the main tasks of the National Forest Carbon Unit is to disseminate information, create access to REDD+ information and the results of consultation meetings as well as training workshops. This will lead to more awareness about progress on the development of the REDD+ issues.

12. In addition to the established institutional structures for feedback mentioned in point 6, an additional feedback mechanism will be developed through stakeholders meetings with all relevant stakeholders. Feedback from the communities and relevant stakeholders for the adjustments or review and revise of objectives and REDD+ will be communicated considering for example through the representatives of the communities, the district commissioner (the representative of the Ministry of Regional Development). Feedback can also be given through the consultation meetings, meetings with subunits, the RPP Assembly and social assessments.

13. All meetings will be monitored and evaluated by the NRWG as well as the independent monitoring body to ensure inclusiveness, transparency and improvement of future activities.

The following representation will be taken into account in the development of the Consultation and Participation Plan

The following representation will be taken into account for the development of the Consultation and Participation Plan

Government	**Tribal communities**	**Local organizations**	**Private Sector**	**Research and Education**
Ministry of Regional Development District Commissioners and their coordinators Relevant governmental institutions	Traditional authorities Forest dependent people Indigenous communities Maroon communities VIDS VSG	Local NGO's/ CBO's Women organizations Youth organizations Development organizations	Timber Industry Trade Unions Media stations (Radio/TV/ Newspaper)	ADEK University CELOS NATIN JSOOC IOL

Schedule and sequencing of activities

Activities	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Development and execution of the consultation and participation plan	x	x	x	x
Capacity building and institutional strengthening identified for relevant groups and communities.	x	x	x	x
Assessment will be needed for the capacity of villagers and their relevant organizations and to develop a relevant capacity building and institutional strengthening program.	x	x		
Awareness workshops and training will be conducted for	x	x	x	x

all interested parties and the structures of the different traditional tribal authorities and representatives of traditional Indigenous and Maroon communities as well as local Indigenous and Maroon organizations.					
Awareness workshops and training will be conducted for local media to disseminate information to the target groups according to the Consultation and Participation Plan	x	x	x	x	
Development of FPIC guidelines for the implementation of REDD+ according to national circumstances.	x	x			
Establishment of a feedback mechanism.	x				
Monitoring of all activities by the NRWG and independent monitoring body.	x	x	x	x	

Table 1b: Summary of Stakeholder Consultation and Participation Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
Conduct awareness training workshops on REDD+ and the implementation of the RPP	NRWG in collaboration with REDD+ consultation and outreach committee develop training programs and awareness material	60.00	60.00	60.00	60.00	**$240.00**
	NFCU and the REDD+ consultation and outreach committee conduct activities	15.00	15.00	15.00	15.00	**$60.00**
Development of the consultation and participation plan	NRWG in collaboration with REDD+ consultation and outreach committee as well as all relevant stakeholders and institutions	100.00				**$100.00**
Development of FPIC guidelines for the implementation of REDD+	NRWG in collaboration with REDD+ consultation and outreach committee as well as all relevant stakeholders and institutions. Receiving assistance from the ministry of RO.	100.00				**$100.00**

Development of a feedback mechanism	NRWG in collaboration with REDD+ consultation and outreach committee as well as all relevant stakeholders and institutions. Receiving assistance from the ministry of RO.	100.00				**$100.00**
Awareness workshop and training for the local media	NRWG in collaboration with REDD+ consultation and outreach committee as well as all relevant stakeholders and institutions.	80.00	60.00	60.00	80.00	**$280.00**
Monitoring	The independent monitoring body conducts monitoring activities	150.00	150.00	150.00	150.00	**$600.00**
		605.00	**285.00**	**285.00**	**305.00**	**$1,480.00**
Conduct a first conference with all representatives of traditional indigenous and maroon authorities, and indigenous and maroon organizations, including local women's organizations, youth organizations and development organizations	Conference is conducted in the city	30.00	30.00	30.00	30.00	**$120.00**
	Transportation	450.00	450.00	450.00	450.00	**$1,800.00**
	Evaluation and report of the conference	10.00	10.00	10.00	10.00	**$40.00**
		490.00	**490.00**	**490.00**	**490.00**	**$1,960.00**
Conduct village meetings where representatives will go back to the respective Chief to present the information and discuss the issues, and to organize that the information is disseminated in the different villages.	Conference is conducted in the city	30.00	30.00	30.00	30.00	**$120.00**
	Transportation	500.00	500.00	500.00	500.00	**$2,000.00**
	Evaluation and report of the meeting	30.00	30.00	30.00	30.00	**$120.00**
		560.00	**560.00**	**560.00**	**560.00**	**$2,240.00**

Conduct a second conference with all representatives of traditional indigenous and maroon authorities, and indigenous and maroon organizations, including local women's organizations, youth organizations and development organizations	Conference is conducted in the city	$30.00	$30.00	$30.00	$30.00	**$120.00**
	Transportation	$450.00	$450.00	$450.00	$450.00	**$1,800.00**
	Evaluation and report of the conference	$10.00	$10.00	$10.00	$10.00	**$40.00**
		490.00	**490.00**	**490.00**	**490.00**	**1,960.00**
	Subtotal	**2,145.00**	**1,825.00**	**1,825.00**	**1,845.00**	**7,640.00**
Awareness workshop and training themes:						
National Readiness Management Arrangements Activities and Budget	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	30.00	15.00	10.00		**$55.00**
Assessment of Land Use, Forest Policy and Governance Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	80.00	10.00	5.00		**$95.00**
National REDD + Strategy Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	50.00	40.00	5.00	5.00	**$100.00**
Implementation Framework Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	50.00	20.00	30.00		**$100.00**

Social and Environmental Impact Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	40.00	10.00	10.00		**$60.00**
MRV Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	80.00	5.00	5.00	5.00	**$95.00**
RPP and REDD+ Monitoring Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	80.00	15.00	15.00		**$110.00**
Program M&E Activities	Development of training programs, conduct training, develop and disseminate awareness and didactical material and information	20.00	5.00			**$25.00**
Monitoring by the independent monitoring body		50.00	50.00	50.00	50.00	200.00
		480.00	**170.00**	**130.00**	**60.00**	**840.00**
Grandtotal 1b		**$2,625.00**	**$1,995.00**	**$1,955.00**	**$1,905.00**	**$8,480.00**

Component 2: Prepare the REDD Strategy

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

Rationale

There are several policies that address key areas of forest sector development, which can be of great importance to identify the key drivers of deforestation and forest degradation. Also the outcomes and review of past and present research activities, in particular the necessary comprehensive future research activities, will provide more insight into key drivers and the status of areas where deforestation or forest degradation takes place.

Looking at the current situation, it is stated that Suriname has a relatively low deforestation rate. Timber production has stagnated at 150,000 – 200,000m^3/year in the last decades, which is about 20% of the potential sustainable timber production. There is a need for in-depth assessments to clarify the rate of deforestation and forest degradation and the main drivers. The country's Multi Annual Development Plan (MADP) for 2006 – 2011 states that the Government of Suriname is working on a specific target of enlarging the area under active timber exploitation by 2010, for the purpose of expanding the timber export volume. Expansion in the mining, agriculture and energy sectors is also envisioned in the MADP. Logging, mining, agriculture and energy production are identified as drivers of deforestation and forest degradation. The main driver of deforestation and forest degradation in Suriname has been mining, including small, medium and large scale mining for bauxite, gold, kaolin and hard core.

In February 2008, the Ministry of Regional Development launched the project "*Support for sustainable development of the interior"* which is funded by the Inter-American Development Bank in collaboration with the Japan Special Fund. The project component 'Collective Rights' of this project has started in January 2009 and focuses on developing demarcation maps of the land use of Indigenous and Maroon communities. On the 29th and 30th of June the Ministry of Regional Development organized a national conference regarding the rights of the Indigenous and Maroon peoples.

A full assessment to clarify other land uses and to calculate the rate of deforestation and forest degradation as well as to analyze its drivers is needed in order to get accurate data. The National REDD+ Committee, with input from relevant key stakeholders, carried out a quick assessment to have an overview of key drivers of deforestation and forest degradation, the conditions that might trigger or accelerate the deforestation and forest degradation process, existing regulations, gaps and constraints. This quick assessment was done during a training organized in collaboration with Conservation International in May 2009. The outcomes of this quick scan are presented in table 2a.2.At present there are no assessments of the effects of these activities on the overall carbon emissions and the development and implementation of safeguards against unplanned carbon emissions. This will be included as one of the activities for component 2a.

The Assessment

A short overview of the drivers of deforestation and forest degradation are described below:

1. **Mining.**
    a. **Bauxite mining.** The SURALCO, a subsidiary of the Aluminum Company of America (ALCOA), has been active in Suriname since 1916. The company had a long-standing working relationship with the Australian-owned BHPBilliton. In 2008, the government and BHPBilliton took the decision to discontinue the joint development of the Bakhuys Mountain Reserves in West Suriname. Recently the government established a state mining company, ALUMSUR. On April 22, 2009 the government signed a memorandum of understanding (MoU) with the Swiss Glencore International AG to continue bauxite mining activities in the Nassau area.

    b. **Gold mining.** Gold mining activities in Suriname are currently increasing. Suriname's gold-bearing areas are part of the Guiana shield, an extensive Precambrian greenstone belt that encompasses 415,000 km² and extends from Venezuela through Guyana, Suriname, and Le Guyane into Brazil's Amazon basin. Most gold mining currently takes place in East Suriname mainly around the Brokopondo Lake. The gold mining sector can be divided into the following:

        a. Small to medium scale gold mining activities. Most of these activities are characterized as unregulated and untaxed gold mining, which takes place in the forests of the interior of Suriname. According to Heemskerk (2005), small to medium-scale gold mining is crucial for the livelihoods of Maroon families in the Suriname interior. Survey data from 2002 suggests that in some villages, 70% to 80% of households obtain regular income from mining members of the household or the extended family (Heemskerk, 2005). Apart from the area, which is directly submitted to deforestation and forest degradation by land clearance and mining activities, unknown areas in the surroundings are subject to forest degradation due to environmental pollution, in particular through the use of mercury.

        b. Large scale gold mining is related to companies that are legalized to carry out mining activities. Currently, Rosebel Gold Mine (RGM), a wholly-owned subsidiary of the Canadian firm IAMGOLD, is the only operator. IAMGOLD also has another project, the Sarakreek project, located at some 100 kilometres south of the Rosebel Mine, where drilling commenced in July 2009. The 2009 exploration program includes 4,000 metres of drilling and detailed follow-up work to extend into the Sarakreek area and to test new prospective areas for gold mining. (Second quarter exploration update, IAMGOLD corporation 2009). A joint venture between SURALCO and Newmont Mining Corporation was established, which resulted into the establishment of SURGOLD, a potential second operator in Suriname. Its project area covers 743 square kilometers of Golden Star's concession rights in the

Brokolonko Range of eastern Suriname. (Golden Star Resources, Ltd. News Release, 2006). Initial exploratory research indicated possible reserves of up to 3 million troy ounces on the Nassau Plateau in East Suriname. SURGOLD commenced negotiations with the government for a production license in 2008, but a downward revision in the estimated reserves in the area has put these negotiations on hold.

2. **Agriculture.** The National Planning Office in 2004 published the report *Agriculture Potential in Suriname*. This report gives an overview of agricultural development in Suriname. It stated that a total of 300,100 ha of land is used for the production of oil palm, rice, soy, maize, pineapple, coconut, various flowers, vegetables and fruits. Agricultural production is still an important activity in Suriname for national development. According to the Agricultural Sector Plan (2004), Suriname has about l.5 million ha coastal area that can be used for agricultural purposes, of which about 10% has been brought into culture. The agricultural potential of the interior is estimated at about 400,000 ha. Prospective agricultural developments are for oil palm, for which already 100,000 ha has been cleared at several locations in the northern part of the interior of Suriname. Other upcoming agricultural potential in smaller scale the expansion of the banana plantation, horticulture (ornamental plants), expansion of rice cultivation and aquaculture (conversion of marsh forest to establish fishponds).
3. **Slash and burn agriculture.** Shifting cultivation or slash and burn agriculture is the most common way of agricultural production in the hinterland and is often the most important source for the Indigenous and Maroon communities to provide in their food needs. The total area of continuous shifting agriculture is estimated at 246,700 ha of forest land of which annually some 16,400 ha is re-cleared via slash and burn activities (Suriname's RPIN 2009).
4. **Energy production.** The supply of electricity is mainly based on the electricity production (installed 180 MW) of the Afobaka hydro plant (a lake of 1550 square kilometers).Energy is also supplied through the thermal power plant of Suralco at Paranam (40 MW) and the diesel power plant (52 MW) of N.V.EBS, the state-owned electricity supply company based in Paramaribo. Currently, a new 161 kV double circuit line has been built to increase the energy supply in the city and coastal districts. Two micro hydropower projects are under construction, one in Palumeu, an Indigenous village in the southeastern part of the country, and another at Granola-sula a location near Dritabiki, a Maroon village. These projects will be used as pilots for other potential hydropower sites in the Sipaliwini District: Tapawatra (Gran Rio river), Gran Dan (Gran Rio river), Felusi Afobasu (Suriname river), Felusi Mindrihati (Suriname river), Busipapaja (Sipaliwini river), Karina Ituru (Kutari river), Sir Walther Raleighvallen (Coeroeni river). (Naipal, 2003)
5. **Infrastructural developments.** Since 2004, the Ministry of Public Works has commissioned the construction of roads in and around Paramaribo with a total length of 275 kilometer of which 175 kilometer in rural areas. Currently various bridges are being built or rehabilitated. It should be mentioned that the road from Paranam to Brokopondo is being paved with asphalt. The Government of Suriname, endorsing the creation of the Free Trade Area of the Americas (FTAA) has further committed itself to participate in the so-called Initiative for the Integration of Regional Infrastructure in South America (IIRSA). The integration, which is physically capitalized by means of the transnational and regional linkage of the (multimodal transportation) infrastructure of the Americas, forms the basis for the establishment and

implementation of the foreseen trade infrastructure for the FTAA. On the national level, the Government of Suriname has reinforced its intention to participate in said regionalism of the infrastructure, which can be extracted from its participation in various meetings of the Executive Technical Groups (ETG) and the Executive Steering Committee (ESC) within the IIRSA project, and its inclusion of the foreseen physical infrastructure within the national planning of Suriname's infrastructure. Taking into account the basic concepts of integration and development and the related sectoral processes aimed at economic and social development of the participating countries, and harmonization of the regional integration infrastructure, Suriname has selected the following national routes for incorporation within the Venezuela-Brazil-Guyana-Suriname Axis of Integration, which is presented in annex 7. Suriname is committed to realizing a North-South connection by extending the current North-South road starting in Paramaribo.

6. **Other relevant drivers to be considered are:**

    a. The 386 km of coast line of Suriname is characterized by extensive mangrove woods and large mudflats. The vast majority of this mangrove coast is still preserved, making this coast a unique and valuable ecosystem, as the mangroves host nurseries for fish, crustacean, sea turtles and the mudflats form some of the major wintering grounds for migrating North American shorebirds. Mangrove also provides a natural protection of the coast against erosion and flooding. For this reason large parts (about 75%) of the coast is designated as Multiple-use Management Area (MUMA, i.e., where sustainable environmental use is allowed) or is protected as a nature reserve of international importance, which means that it meets several criteria of the international Ramsar Wetlands Convention. However, according to Naipal (Coastal Morphodynamics of Suriname, 2006), the following is noticeable:

        i. The narrow stretch behind the mangroves reaching up to 50 km land inward (an area of about 10,000 km2) is the most important area for socio-economic activities. More than 80% of the population lives in this zone. Many of the original swamps have been drained to create agricultural land (polders) and in many places much of the fresh water flow to the coast has been canalized.

        ii. Mangroves are being harvested for the construction industry and oil industry. This may have a serious impact on the mangrove woods.

        iii. There are already a few locations were coastal erosion poses a direct threat to the coastal communities because of the removal of mangroves. These are in the Coronie District (near Totness) and at Weg naar Zee. Similar problems occur a bit more land inward along the Commewijne and the Suriname River, where there is a failure of dikes. This is causing loss of properties and the infiltration of saline sea water on agricultural land.

Overall, land-use planning is important to spatially organize the different land use activities in the country. More specifically, there is a need for:

1. Coherent land use and zoning maps. Currently, there is a lack of land use information. Therefore developing such maps will point out the different land-use and zoning classes as well as other earth surface features such as facilities, resources, development of roads, industrials (mining, agriculture, hydro-energy, timber),

urbanization, corridors etc. The land use and zoning maps will also map those areas of environmental concern such as deforestation and forest degradation. This will be of great use for further land-use planning consistent with national policies.

2. Development of relevant baseline studies. The aim of the baseline studies is to generate data and to provide insight in the geographic areas. This will assist to establish a baseline for future assessments such as the SESA. Therefore, baseline studies serve as a basis for further research in order to be able to conduct impact assessments. Topics considered for baseline studies are among others:
    a. Land uses in areas;
    b. Major changes in areas;
    c. Short, medium and long term planning of land use by the community;
    d. (Sectoral) legislation and policies;
    e. Assessment of the relevance of existing baseline data; and
    f. Identification of factors which will have an influence on new/further developments.

    The results of the baseline studies will be used for among others:
    a. Environmental planning within specific areas;
    b. Sectoral and national effects;
    c. Development of mitigation measures;
3. Environmental planning is one of the activities leading towards land-use planning and zoning. Environmental planning will focus on the implications of development plans upon the environment which can be used for the execution of the Strategic Environmental and Social Assessment (SESA).
4. Research to develop and implement sustainable agricultural practices in areas with appropriate soils;
5. Research to establish and use criteria essential for sustainable logging, particularly long- term studies that document the growth rate of key timber species, their reproductive cycles, and the ecological conditions necessary to ensure their regeneration into the forest canopy;
6. Studies that address the cost and benefits from salvage logging as an integral part of conversion aimed at increasing agricultural production;
7. Development and implementation of policies and future integration of land use plans;
8. Development of monitoring mechanisms for land use changes;
9. Development and implementation of new sustainable forest management protocols and criteria well as national legislation and policies;
10. Capacity building to improve forest management, environmental impact and social assessment (e.g. improvement of institutional and human resource capacity) and
11. Awareness-building on REDD+ and the importance of sustainable management of the forests

The land use and zoning maps will be part of the RPP implementation. In this respect the

NRWG will coordinate all activities leading towards the incorporation of land use in the execution of the RPP.

Table 2a.1 gives an overview of the underlying causes of deforestation and forest degradation considering direct drivers and factors. The major land use trends are also identified. Still, a thorough research is needed to gain accurate information on indirect drivers, land tenure and the implications of REDD+. Also the past trends and forecast scenarios needs to be addressed, which will be done for further assessment.

All assessments for the development of the land use planning will be done in close collaboration between the NRWG and relevant stakeholders through research and consultation meetings. The results of the land use, forest policy and governance assessments will identify the main needs as well as the gaps that should be addressed for the implementation of the REDD+ readiness strategy. Each assessment will identify the gaps, the effects, the mitigation measures as well as the monitoring.

Past efforts to reduce deforestation and forest degradation have been made through the following:

1. The enforcement of forest (related) laws, policies and regulations:
    a. The Constitution of the Republic of Suriname stipulates that the social goal of the state is to create and stimulate circumstances that are necessary for the protection of nature and maintenance of ecological balance. It also states that all forests, except private owned land, belong to the state. Forests on private land do not cover more than a total area of 50,000 ha. The Constitution does not provide for collective ownership rights of land. The government grants land tenure for various purposes to private individuals, private enterprises and organizations, and to communities. According to the Forest management Act of Suriname the following forms of tenure are granted:
        i. Timber concessions, which are granted to companies and individuals
        ii. Communal Wood Cutting Licenses, granted on the basis of the Timber Act of 1947 to forest based communities (Maroon and Indigenous), and since 1992, community forests, which are granted on the basis of the Forest Management Act.
        iii. Incidental cutting licenses, which are granted to individuals and companies for salvaged logging.
    b. The Forest Management Act of 1992, which replaced the old Timber Act, contains a number of requirements intended to promote sustainable forest management practices for the production of timber and non-timber products;
    c. The Forest Service (LBB) of the Ministry of RGB is responsible for the management of all forests in the widest sense of the word, thus including nature conservation and law enforcement;
    d. The Nature Conservation Division (NB) of the Forest Service is the CITES authority and is responsible for issuing permits for export of CITES species and therefore also for the enforcement of laws on hunting and wildlife (the Game Law 1954).
    e. The National Forest Policy was formulated in 2006. The overall objective of the policy is “to enhance the contribution of the forests to the national economy and

the well-being of current and future generations with due regard for the conservation of the biodiversity". Currently, a Strategic Action Plan for the forest sector has been produced and needs to be implemented.

f. In view of the responsibilities with respect to general law enforcement, the Police Force and the Public Prosecutor's Office are authorized to apprehend and prosecute people who are not in compliance with the forestry laws

Deforestation and forest degradation still does occur and could possibly increase due to a lack of investment in research, monitoring and stringent control activities, as well as the inaccessibility of certain forest areas, which can only be reached by air or by boat.

2. The establishment of SBB in 1998, mandated by the Forest Service (LBB) to manage forest production and therefore responsible for the supervision and control of all logging. The Forest Management Act of 1992 enables forest guards to confiscate illegally logged timber and to enforce the Forest Management Act. SBB also carries out forest monitoring and forest production statistics. However, a full and complete forest inventory and monitoring program has not been established due to a lack of capacity and funding.
3. The establishment of the National Environmental Council and the National Institute for Environment and Development in Suriname (NIMOS) in 1998 to implement and monitor the national environmental policy. Guidelines for environmental and social impact assessments (ESIA) were established for logging, mining, agriculture and energy production as well as for other activities that have a significant impact on the environment. These guidelines are important for the implementation of the REDD+ readiness strategy. A further description is given in component 2d. However, the development of an ESIA is not mandatory as yet because the environmental legislative framework is still in the constitutional process.
4. The development of the National Biodiversity Strategy (NBS) in March 2006, which provides the national vision, goals and strategic direction to be pursued, in order to conserve and sustainably use the nation's rich biodiversity and biological resources; foster sustainable management of its natural resources and support the equitable sharing of biodiversity related services and benefits, provided by ecosystems. The strategic forest related directions of the NBS are:

a. To promote and strengthen research and monitoring programs ;

b. To improve agriculture and land use planning, as well as, review current agricultural policies and activities;

c. Sustainable use and management of forest resources through updated inventories, strengthen enforcement, promotion of research, improvement and expanding programs, review and revise existing laws, implement a strong forest management authority and implement the national forest policy;

d. Review and strengthen laws/rules and enforcement regarding mining as well as promote ecologically responsible mining and mineral development practices;

e. Strengthen the capacity of ecologically sustainable tourism and expand the sustainable development of tourism infrastructure and

f. Conduct public awareness, education and community empowerment.

There are some monitoring activities with regard to biodiversity. In the 1980s and earlier,

specific permanent vegetation sampling plots were established by CELOS/NARENA. A monitoring program was set up in 2005 in the northern part of the Central Suriname Nature Reserve (CSNR) with the help of Conservation International, which is part of a larger, worldwide Tropical Ecology, Assessment and Monitoring (TEAM) program and is based on standard protocols for vegetation, climate and a limited number of species such as primates, birds, large mammals and butterflies.

Although a quick review has been given of the analysis of the performance of past efforts to reduce deforestation and forest degradation, a full assessment has to be conducted to acquire accurate data. This assessment will be based on causality analysis and existing studies/ reports and as well as consultation meetings. The assessments will be addressing the following subjects:

1. The social, economic and political impacts towards the implementation of taxation and revenues measures;
2. Relevant policies and regulations regarding REDD+.
3. The incorporation of the results of the regulations regarding REDD+ into the MADP 2011-2016 as a regulatory framework.
4. Quantify drivers of deforestation and forest degradation as well as social and environmental effects by using land use assessment;
5. Institutions with respect to the monitoring of deforestation and forest degradation as well as the enforcement of regulations;
6. Assessment of the direct and indirect drivers and factors inside and outside the forest sector, as well as the identification of land tenure and other issues affecting REDD+;
7. Mitigation measures to reduce deforestation and forest degradation through the implementation of REDD+;
8. Mitigation measures for effective policy implementation or development considering REDD+;
9. Monitoring and enforcement measures;
10. Programs for capacity building and institutional strengthening;
11. Costs and potential funding sources analyses;
12. Financial mechanisms applicable to REDD+ , its predictable effects and mitigation measures.

The abovementioned assessments will be carried out in collaboration with (governmental) institutions, relevant stakeholders as well as specialized national and international researchers.

To come to a full assessment, meetings will be held to consult and inform all relevant stakeholders.

The expected outcome of the activities are:

1. Consultation meetings are held to consult and inform (governmental) institutions, as well as relevant stakeholders of the Surinamese community;
2. An assessment report published with the following results:
    a. Relevant policies and regulations regarding REDD+ as well as mitigation

measures and results;

b. Institutional capacities and capabilities to monitor deforestation and forest degradation and enforcement of regulations, as well as mitigation measures and results;

c. Indirect/direct drivers of deforestation and forest degradation. as well as the mitigation measures and results;

d. The effects of the drivers of deforestation and forest degradation activities on the overall carbon emissions and development of safeguards against unplanned carbon emissions.

e. Identification of land tenure and other issues affecting REDD+;

f. Land-use planning;

g. Environmental planning;

h. A program for capacity building and institutional strengthening;

i. A budget with the estimated costs and possible funding.

The screening and evaluation of these results will be conducted by the NRWG. The TOR is presented in annex 2.

Time framework

Activities	2010	2011	2012	2013
Quantitative assessment of land use, drivers of deforestation and forest degradation, the social and environmental effects;	X	X	X	X
Assessments of the effects of activities of the drivers of deforestation and degradation on the overall carbon emissions and the development and implementation of safeguards against unplanned carbon emissions.	X	X		
Assessment and revision of relevant policies and regulations to reduce deforestation and forest degradation;	X			
Assessment of institutional capacities and capabilities considering the economic, social, political, environmental context;	X			
Assessment of institutions with respect to monitoring of deforestation and forest degradation, as well as enforcement of regulations;	X			
Assessment of direct and indirect drivers and factors inside and outside the forest sector, as well as other issues affecting REDD+;	X	X		
Identification of land tenure, and other resources affecting REDD as well as strengthening the land administration	X	X	X	X
Establish mitigation measures for effective policy		X	X	

implementation or development with due account for REDD+;				
Establish mitigation measures for effective monitoring and enforcement;		X	X	X
Establish programs for capacity building and institutional strengthening;		X	X	X
Establish mitigation measures to reduce current and future deforestation and forest degradation through the implementation of a REDD+ strategy ;		X	X	
Research on the impact of social, economic and political to implement taxation and revenues measures	X	X	X	
Costs and potential funding sources analyses.		X	X	
Monitoring by the independent monitoring body	X	X	X	X

Table 2a: Summary of Assessment of Land Use, Forest Policy and Governance Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
Quantitative assessment of land use, drivers of deforestation and forest degradation, the social and environmental effects.	Assessments will be conducted by local consultants with assistance of international consultants	30.00	15.00	5.00	5.00	**55.00**
Assessments of the effects of activities of the drivers of deforestation and degradation on the overall carbon emissions and the development and implementation of safeguards against unplanned carbon emissions.	Assessments will be conducted by local consultants with assistance of international consultants	100	75			**175**
Assessment and revision of relevant policies and regulation to reduce deforestation and forest degradation;	Assessments will be conducted by local consultants with assistance of international consultants	10.00				**10.00**
Assessment of the institutional capacities and capabilities considering the economic, social, political, environmental context;	Assessments will be conducted by local consultants with assistance of international consultants	10.00	15.00			**25.00**
Assessment of institutions with respect to monitoring of deforestation and forest degradation, as well as enforcement of regulations;	Assessments will be conducted by local consultants with assistance of international consultants	10.00				**10.00**
	Develop, upgrade and revise (existing) regulations	10.00	15.00			**25.00**
	Meetings and desk research	8.00	5.00			**13.00**
Assessment of the direct and indirect drivers and factors inside and outside the forest sector as well as the identification of land tenure and other resource issues effecting REDD;	Assessments will be conducted by local consultants with assistance of international consultants. Two field visits will be conducted in the interior.	30.00	40.00			**70.00**

Identification of land tenure, and other resources affecting REDD as well as strengthening the land administration	Assessments will be conducted by local consultants with assistance of international consultants. Meetings and Two field visits in the interior	30.00	10.00	5.00	5.00	**50.00**
Establish mitigation measures for effective policy implementation or development considering the REDD+	Assessments will be conducted by local consultants with assistance of international consultants		30.00	10.00		**40.00**
Establish mitigation measures for effective monitoring and enforcement;	Assessments will be conducted by local consultants with assistance of international consultants		30.00	10.00	5.00	**45.00**
Establish mitigation measures to reduce current and future deforestation and forest degradation through the implementation of REDD strategy	Assessments will be conducted by local consultants with assistance of international consultants		30.00	10.00	5.00	**45.00**
Analyses of costs and potential funding sources	Assessments will be conducted by local consultants with assistance of international consultants. Meetings, desk research, expert consultations will be conducted		40.00			**40.00**
Research on the impact of social, economic and political to implement taxation and revenues measures	Assessments will be conducted by local consultants with assistance of international consultants. Meetings, desk research, expert consultations will be conducted	150.00	100.00	5.00	5.00	**260.00**
Monitoring by the independent monitoring body		50.00	50.00	50.00	50.00	
Grandtotal 2a	**Total**	**$438.00**	**$455.00**	**$95.00**	**$75.00**	**$863.00**

Table.2a1 Results of the quick land use assessment

Potential Deforestation driver and region	National Program or Strategy that it may fall under	Conditions that might trigger or accelerate the deforestation and degradation process	Existing regulations	Gaps and constraints
Mining	• Suriname's Multi Annual Development Plan 2006 – 2011 (MOP) • The National Environmental Policy • The Decentralization Program • The Brokopondo Agreement	• High prices • Potential mining of other resources • Weak monitoring of mining activities • Weak enforcement • Increase of national/international demand • Increased accessibility of the interior e.g. due to road building • Development and accessibility to specialized mining methods	• The Mining Act • The Bauxite Act	• Lack of integrated mining policy which might lead to adopting revised legislation • Lack of/ insufficient control (illegal mining, illegal immigration, health and safety issues etc.) • Monitoring costs • Research costs • Lack of research capacity and funding • Redefine small scale mining • Environmental and social impact assessment (ESIA) is not mandatory • Legal asymmetry among neighboring countries • Draft Environmental Act
Logging	• Suriname's Multi Annual Development Plan 2006 – 2011 (MOP) • National Forest Policy • Draft Interim Strategic Action Plan • The National Environmental Policy • The National Biodiversity Strategy	• Land use conversion • Increased production • Weak monitoring mechanism • Weak enforcement • Insufficient awareness about REDD and the importance of SFM • Weak SFM protocols and criteria • Development and accessibility to specialized logging methods • Increased accessibility of the interior due to road building • International demand for timber and timber products • Timber cutting rights such as timber concessions, community forest & incidental cutting licenses.	• Forest Management Act • Nature Conservation Act • Game Act	• Institutional capacity strengthening (monitoring, training, outreach) • Lack of /insufficient control (illegal logging, illegal immigration, health and safety issues etc.) • Monitoring costs • Research costs • Lack of research capacity and funding • No baseline studies • Incoherent land use map • ESIA is not mandatory • Improvement of the National Forest Inventory System • Improvement of Current Lumber Laws is needed • Family based concessions could be improved and promoted • Commercially oriented concession promoted • Draft Environmental Act

Potential Deforestation driver and region	National Program or Strategy that it may fall under	Conditions that might trigger or accelerate the deforestation and degradation process	Existing regulations	Gaps and constraints
Infrastructure activities (main roads, dams, dikes)	• Suriname's Multi Annual Development Plan 2006 – 2011 (MOP) • Regional and National Infrastructural Program • The National Environmental Policy	• Increased accessibility of the interior due o to road building o upgrading river-transport infrastructure o expansion of air links o tourism activities o mining activities • Poor land use planning • Increased housing construction projects (public grand private sector) • Increased industrial activities excluding mining and agriculture. • Finance sources available that do not require ESIA • Weak monitoring of activities • Weak enforcement	• Regional Development Act • Urban Development Act • Architecture Act • Road Authority Act • Planning Act	• ESIA is not mandatory • Monitoring costs • Research costs • Lack of research capacity and funding • Request information from key institutions • Draft Environmental Act
Agriculture	• Suriname's Multi Annual Development Plan 2006 – 2011 (MOP) • Agriculture sector plan • The National Environmental Policy • Agriculture Census by Ministry of LVV	• Government approval for starting-up palm oil plantations and others.	• Export Act regarding Agriculture and Forest products • Nature Conservation Act • Agricultural Act	• Monitoring costs • Research costs • Lack of research capacity and funding • EIA is not mandatory • Draft Environmental Act
Slash and burn activities	• Agriculture Census by the Ministry of LVV	• Income increase from mining activities • Permanent agriculture • Market growth for agriculture products • Migration due to natural disasters (flooding hinterlands) • Increase in commodity prices	• Tribal sustainable practice	• Lack of information • Monitoring costs • Research costs • Lack of research capacity and funding • Land allocated for slash and burning • Improvement needed for the National Forest Inventory System • Draft Environmental Act

Potential Deforestation driver and region	National Program or Strategy that it may fall under	Conditions that might trigger or accelerate the deforestation and degradation process	Existing regulations	Gaps and constraints
Energy production	• Suriname's Multi Annual Development Plan 2006 – 2011 (MOP) • The Brokopondo Agreement	• Increase demand on energy • Potential for bio-fuels and increased hydro energy		• ESIA is not mandatory • Monitoring cost • Research cost • Lack of research capacity • Request information from key institutions • Draft Environmental Act

2b. REDD+ Strategy Options

Rationale

Suriname is an important part of the Amazon Region, an expanse of more than 250 million hectares, representing the largest block of intact tropical forest on earth. In the coastal plain of Suriname a great variety of forest types exist, such as extensive swamp and mangrove forests. Some types of swamp and savanna forest are exploited for wood production. In the mid 90's the forest production area was expanded from 2.5 to 5 million ha in order to accommodate part of the growing demand. Currently the demand for timber concessions is higher than has been provided for. Efforts are underway to sustainably expand the timber exploitation areas to accommodate further demands for timber concessions.

To increase production, different stakeholder platforms and processes have been used to develop plans to formulate the current forestry strategies. The best known are the Multi Annual Development Plan (MADP)MOP 2006 – 2011), the National Biodiversity Strategy (2003) and the National Forest Policy (2005).

The following points provide an overview of the national characteristics and current status of the forestry sector:

- About 90% of our land area is still covered with forest;
- The deforestation rate is approximately 0.02%/annually;
- 13% of the forest area is formally protected by law, including the Central Suriname Nature Reserve of 1.6 million ha;
- Based on an assessment, about 5 million ha is designated for sustainable timber production. This area maybe be extended as part of ongoing developments and national circumstances;
- At present the timber production is around 200.000 m3
- The state owns almost 97 % of the forest and about 60.000 ha are privately owned;
- Timber cutting licenses can be granted by the government such as concessions, exploration rights, salvage logging, community forestry which are granted to forest based communities;
- Forestry contributes about 2 % to the GDP. Adding the indirect revenues such as from ecotourism enhances the contribution to the GDP to about 4 %. However, services as watershed management, biodiversity and other environmental services are not yet included in the GDP;
- About 5% of the total working force is employed in the forestry sector;
- The management of the forest is based on the following laws: Timber act 1947, establishment of the Forest Service, Forest Management Act 1992, Nature Conservation Act 1954, Game Act 1954;
- At present the major sectors associated with deforestation and forest degradation are: the mining industries (oil, gold, bauxite, hard core, kaolin, water), forestry, infrastructural development, development of hydro-energy and permanent agriculture

plantations. Furthermore, population growth and future developments such as bio-fuel plantations, increased energy demand and adaptation to sea level rise, can be taken along.

The current MADP emphasizes that economic development must proceed in a manner compatible with the environment, taking into account both ecosystem services and climate change. This statement gives access to implement a REDD+ readiness strategy in all national development efforts. The MADP also states that hydro-energy is a major component of Suriname's energy future. Some forms of hydro-energy can have direct implications for forested areas and need to be considered as a driver of deforestation and forest degradation. The current MADP also pays attention to infrastructural development to increase accessibility towards the interior in order to further enhance the participation of hinterland communities in economic developments and as such to increase their direct benefits.

A summary of preliminary REDD+ strategy options

REDD+ readiness strategies need to be incorporated into overall national developments, by strengthening the capacity and capabilities of all relevant (governmental) institutions and stakeholders, by increasing sustainable national (economic) development, including sustainable forest management, appropriate monitoring and enforcement, in order to achieve emission reductions, removals and avoidance. The national REDD+ readiness strategy will address interrelated social, political and economic drivers of deforestation and forest degradation at the national level, will identify and promote economic opportunities for sustainable forest management and enhance national efforts to reduce, remove and avoid emissions, with due considerations for the National Forest Policy and the Multi Annual Development Plan.

Issues to be considered when identifying programs that will achieve development of a national REDD+ readiness strategy while taking into account the reduction, removal and avoidance of emissions from deforestation and forest degradation and the design of a system for providing targeted financial incentives are:

- Design of national, institutional and legal framework relevant to REDD+;
- Implementation of the National Environmental Policy and National Forest Policy for emission reductions, removals and avoidance and relevant strategies;
- Long- term monitoring of development processes by the Government;
- Spatial planning and effective land use planning;
- Promote standing forests as a carbon reservoir taking into consideration the role of sustainable logging;
- Promote the inclusion of standing - intact and non-intact - forests in the REDD+ scheme and REDD+ strategy;
- Promote and assess markets for forest carbon credits (also on voluntary markets);
- Establish a monitoring system for transparency, and the equitable sharing of revenues from carbon credits for ecosystems services;
- Capacity building and institutional strengthening for implementing and monitoring institutions;
- Design funding mechanisms and alternatives for forest carbon;
- Design benefit sharing mechanisms.

To succeed in the development of the national REDD+ readiness strategy, consultations with

a wide range of stakeholders at all levels of the government is needed. Through consultation and participatory meetings, a process will be set up to discuss, develop and implement plans and strategies. Representatives of relevant (governmental) institutions, Indigenous and Maroon communities, and other relevant civil society stakeholders will be consulted individually and/or in key stakeholder groups, as well as through wide participatory meetings with the aim to ensure broad-based input for the proposed national REDD+ readiness strategy. An assessment is needed of all relevant stakeholders for the development of a national REDD+ strategy.

The national REDD+ readiness strategy will be developed with due account for the following key elements:

1. The design of the national REDD+ readiness strategy will be coordinated by the National REDD+ Working Group assisted by the National Forest Carbon Unit (NFCU) to implement the necessary activities.
2. The design of the most effective and efficient strategy to identify the root causes of deforestation and forest degradation and future drivers hereof, through an assessment of current and future deforestation and forest degradation drivers.
    a. The assessment of the drivers of deforestation and forest degradation mentioned in component 2a will be continued with in-depth research of:
        i. Existing data and research studies. Research studies have been done by various researchers and institutions but the data has not yet been collected and placed into a databank which makes it difficult to present a table of all these studies. Also data from the informal sector is not yet included. Assessment of existing data is needed to know if it is relevant for the design of the national REDD+ readiness strategy. The output of this assessment is to initiate in-depth research, to contribute to the environmental and social impact assessment, the mitigation measures and monitoring procedures.
        ii. Linkage with other sectors;
        iii. Linkage with national (economic) development and the Multi Annual Development Plan;
        iv. Strengths and weaknesses of public interventions;
    b. Determination of carbon stocks in land uses and associated changes in carbon stocks due to land use change activities.
    c. Baseline studies to assess historical emissions from deforestation and forest degradation.
    d. Assessments for identification of monitoring plots and
    e. Identification of specific areas for REDD+ demonstrations activities.
3. Development of the following methodologies:
    a. A national-level forest carbon accounting methodology based on IPCC guidelines and forest carbon standards for project development;
    b. A national-level monitoring, report and verification methodology;
    c. A methodology for the projection and modeling of future emissions from deforestation and forest degradation;

d. A national Reference Emission Level (REL)/ Reference level;

e. A national forest carbon database for recording;

f. A national funding/benefit sharing mechanism;

g. A compliance mechanism for emission reductions and

h. Methodologies to address leakage and non-permanence.

4. Identification of financial investment needs, as well as analysis of costs and benefits. At present timber extraction, processing and related activities account for about 5% of formal employment. The timber sector contributes less than 3% of GDP and exports generate around U$D 4 – 5 million annually. The implication for REDD+ activities in areas that are potentially suitable for other land uses, such as mining and agriculture, is that REDD+ may be an opportunity cost. However, the magnitude of the opportunity cost will depend on the location of the particular forested area. The following financial analyses will have to be conducted:

    a. Cost-benefit analyses of various livelihood alternatives;

    b. Opportunity costs, investment costs, transaction costs and benefits;

    c. Assessment of methodologies for carbon accounting;

    d. Assessment of the linkage between national accounting systems and other relevant national/sub-national programs;

    e. Development of financial mechanism with incentives for conservation and sustainable forest management, including sustainable logging in concessions and community forests;

    f. Commissioning of research studies for financial and funding mechanisms for forest carbon ownership;

    g. Assessment of financial risks and their mitigation;

    h. Development of protocols for methodologies used and for forest carbon project approval;

    i. Development and implementation of demonstration activities;

    j. Technical assistance will be sought for land rights issues. The government has organized a national conference on “Tribal Rights” in Suriname on June 29 – 30, 2009.

    k. Technical assistance will be sought to design the REDD+ readiness strategy.

5. Analyses of institutional capacities

    a. Assessment of institutional settings required to manage REDD+ within governmental structures, taking into account coordination, monitoring, reporting, participation and viable benefit sharing;

    b. Capacity building of institutions through awareness and training.

All of the abovementioned activities to be conducted will be monitored by the independent monitoring body.

Schedule and sequencing of activities

Activities	Year 1	Year 2	Year 3	Year 4
Conduct assessment to address interrelated social, political, and economic drivers of deforestation and forest degradation at the national level	X	X		
Develop a reference emission level or reference level based on future economic growth (adjustment factor)	X	X	X	
Design transparent financial structures for an equitable distribution of forest carbon benefits		X	X	X
Develop a national forest carbon financial plan revenue		X	X	X
Develop a national-level forest carbon inventory based on IPCC guidelines	X	X	X	
Develop a national-level permanent forest carbon monitoring methodology;	X	X	X	
Develop a methodology for projection and modeling of future emissions from deforestation and forest degradation		X	X	X
Develop a national Reference Level	X	X	X	
Develop a national Monitoring, Reporting and Verification (MRV) system with due account for GIS and remote sensing	X	X		
Develop a national forest carbon database	X	X		
Develop a forest carbon rights regulatory framework	X	X		
Monitoring by the independent monitoring body	X	X	X	X

Table 2b: Summary of REDD+ Strategy Option Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
Development of the national REDD+ strategy	Coordinated by the NRWG with assistance of NFCU and consultant with expertise in REDD+ strategies. Workshops are conducted.	300.00	150.00	150.00		**600.00**
Financial analyses	Activities will be conducted with assistance of international consultants. Desk research and workshops will take place.	150.00	100.00			**250.00**
Analyze methodologies	Activities will be conducted with assistance from international consultants. Workshops are conducted.	300.00				**300.00**
Analyses of institutional capacities	Conduct desk research and meetings with relevant institutions. A local consultant will be hired to perform activities.	60.00				**60.00**
Expert consultations and training for all relevant stakeholders		250.00	100.00	100.00		**450.00**
Monitoring by the independent monitoring body		50.00	50.00	50.00		150.00
Grandtotal 2b		**$1,110.00**	**$400.00**	**$300.00**		**$1,810.00**

2c. REDD Implementation Framework

Rationale

The national REDD+ readiness strategy can provide opportunities for Suriname to meet its goals for sustainable forest management simultaneously with poverty reduction initiatives. Currently, an Interim Strategic Action Plan for the Forest Sector in Suriname 2009 – 2013 has been developed, whereby opportunities are created to implement the national REDD+ readiness framework as well as complementary REDD+ readiness issues. The Interim Strategic Action Plan provides results of analyses of the forest sector, including growth and yield, relevant policy and legal framework, forms of land tenures, concession policies, timber rights and production and interim strategic action plans. This plan specifically states that a strategy needs to be developed to promote Suriname as a highly forested and low deforestation (HFLD) country in relevant international forums, and this could contribute to mainstreaming the national REDD+ readiness strategy into the implementation of the Interim Strategic Action Plan.

Summarize the relevant information and ideas on your REDD+ implementation framework

The national REDD+ readiness implementation framework focuses on the assessment of existing institutional, economic and legal settings to come to an effective national REDD+ framework, with due consideration for the reduction of emissions from deforestation and forest degradation, while providing opportunities for national economic development and accessibility to the carbon market.

To come to the design of the national REDD+ readiness framework, the following needs to be taken into account:

- Institutional arrangements. Currently, the national Multi Annual Development Plan (2006-2011), the Interim Strategic Action Plan for the Forest Sector (2009-2013), and the National Environmental Policy are of great importance for the development and implementation of REDD+ through mainstreaming REDD+ into these existing programs. Therefore it will be important to strengthen the capacity and the capabilities of the existing institutions and institutional frameworks. Another institutional structure to consider is the decentralization of the districts, which is being executed through the 'Decentralization Local Government Strengthening Program' (DLGP)´ developed with technical and financial assistance of the Inter-American Development Bank (IDB). The main goal is to establish 'fiscal decentralization' and to build capacity for program and financial management within the respective district administration. This will allow a real transfer of tasks and responsibilities form the national to the local level within the various districts.
- Economic arrangements. In January 2008, a Rapid Assessment Report of Existing Financial Mechanisms for Sustainable Forest Management in Suriname was commissioned by the Government of Suriname and conducted in collaboration with Tropenbos International Suriname and the Ministry of Agriculture, Nature and Food

Quality Netherlands, in support of the Country Led Initiative (CLI) on Financing for Sustainable Forest Management, which was held in September 2008 in Suriname. This assessment presented a national inventory and evaluation of existing financing mechanisms in Suriname, focusing on support of sustainable forest management including conservation of forests. The report stated that existing financial mechanisms for sustainable forest management are underdeveloped and not always available and if available, under less favorable conditions at a relatively high price and no grace periods. Other factors which have a negative influence on forest financing are listed in the table below:

1. The absence of a clear investment policy framework with specific incentives, arrangements and facilities for the forest sector;
2. The absence of formal collective land rights and land titling for traditional forest communities;
3. The absence and/or outdated legislation on concession policies for timber and non-timber forest products;
4. The absence of an enabling investment law with clearly defined incentives, which protects domestic and foreign investors in order to attract bona fide investments;
5. Insufficient capacity to access and utilize available funds;
6. Increasingly high conditions and demands to access available funds;
7. Lack of international arrangement for "Highly Forested and Low Deforestation countries" like Suriname.

These factors will be addressed when developing the national REDD+ readiness framework and are considered of great importance for linkage with the national economic development and the development of national funding or benefit sharing mechanisms for forest carbon emission reductions. Also market requirements need to be addressed, including verification and issues of carbon credits, legal security, insurance against loss and price fluctuations.

- Legal arrangements. As described in the " Rapid assessment on existing financial mechanisms for sustainable forest management in Suriname". There is an absence of legislation and/or existence of outdated legislation on concession policies for timber and non-timber forest products. The development of a national REDD+ readiness framework needs to consider improvement of outdated legislation, as well as the development, harmonization and/or amendment of legislation for the implementation of REDD+.

For the design of the institutional, economic, legal and governance arrangements for the implementation of the REDD+ readiness strategy and in order to be in compliance with obligations under a future REDD+ regime, in-depth research is required for the following:

- the role of the national government and its institutions;
- funding/benefit sharing;
- national REDD+ registry;
- accountability.

Currently, there are some national arrangements which can give an impulse, but these structures need to be assessed, and their capacities need to be strengthened to implement REDD+. Among the national institutional arrangements are the Multi Annual Development

Plan, the establishment of a Designated National Authority for the Clean Development Mechanism and the ongoing project of the decentralization of districts. A full assessment of these arrangements should be conducted in order to ensure, efficient and effective programs for the development of a national REDD+ readiness framework.

To achieve the design of such a framework, the following activities will be conducted:

Activities	Expected outcome
Assessment of policy, legal and institutional settings with due account for the implementation of REDD+ (component 2a)	Institutional frameworks developed Programs developed for increased institutional capacity
Assessment of forest trading mechanism, with due account for the financial elements of component 2b: • Funding mechanism for benefit sharing of forest carbon • A forest carbon financial plan • A national forest carbon accounting system Design a mechanism to target financial incentives for REDD+ Design a system to verify findings and ensuring reliability and accuracy Design a REDD+ networking mechanism	Forest carbon markets analyzed A national funding/ benefit sharing mechanism developed to ensure a fair distribution of profits to all actors involved A national forest carbon accounting system established Protocol for the independent verifier developed Criteria established for the selection of REDD+ demonstration sites and pilot activities Increased institutional capacity A national framework for REDD+ developed
Collaboration with all relevant stakeholders through workshops, meetings and training.	Enhanced interest and commitment to participate in the development of the REDD+ strategy and policy Increased awareness on carbon trading Increased capacity building A plan for capacity building and technology transfer developed

These activities will be executed through analytical studies, surveys, benchmark socio-economic research, and consultation meetings with all stakeholders and the government. The Ministry of Physical Planning, Land and Forest Management will coordinate the development of the national REDD+ readiness framework in collaboration with all relevant governmental

and non-governmental institutions and stakeholders. An assessment of these stakeholders is already included in component 2b.

Schedule and Sequencing of activities

	Year 1	Year 2	Year 3	Year 4
Development of institutional frameworks for social, economic and legal arrangements, as well as programs for increased institutional capacity	X	X		
Assessment of forest carbon trading mechanism	X	X	X	
Design and implement a national funding/ benefit sharing mechanism	X	X	X	
Design and implement a national forest carbon accounting system	X	X		
Design and implement a mechanism to target financial incentives for REDD+	X	X		
Design and implement a system to verify findings and ensure reliability and accuracy, as well as its protocols	X	X		
Design and implement a REDD+ networking mechanism	X	X		
Develop a REDD+ reporting structure		X	X	
Develop a plan for capacity building and technology transfer		X	X	
Disseminate information to all stakeholders	X	X	X	X
Stakeholder consultations	X	X	X	X
Monitoring by the independent monitoring body	X	X	X	X

Table 2c: Summary of Implementation Framework Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
Development of institutional frameworks for social, economic and legal arrangements as well as programs for increased institutional capacity	Workshops and meetings will be held to come to institutional frameworks with assistance of international consultants	60.00	50.00			**110.00**
Assessment of forest carbon trading mechanism	Workshops, meetings and research will be conducted to come to the design and implementation of a national funding/ benefit sharing mechanism.	150.00	30.00	5.00		**185.00**
	Hire international consultants, conduct workshops, design and implement a national forest carbon accounting system	150.00	20.00	5.00		**175.00**
	Hire international consultants, conduct workshops, design and implement a mechanism to target financial incentives for REDD+	100.00	80.00			**180.00**
	Hire international consultants, conduct workshops, design and implement a system to verify findings and ensuring transparency, reliability and accuracy as well as its protocols	80.00	20.00			**100.00**
Design and implement a REDD+ networking mechanism	Desk research, conduct workshops	100.00	50.00			**150.00**
Development of a REDD+ reporting structure	Desk research, conduct workshops		30.00	10.00		**40.00**
Expert consultation and training		75.00	50.00	10.00		**135.00**
Monitoring by the independent monitoring body		50.00	50.00	50.00		150.00
Grandtotal 2c		**$765.00**	**$380.00**	**$80.00**		**$1,225.00**

2d. Social and Environmental Impacts

Rationale

The national environmental policy of Suriname aims to protect the environment while achieving sustainable development. The establishment of the Ministry of Labor, Technological Development and Environment (ATM), the National Environmental Council and the National Institute for Environment and Development in Suriname (NIMOS) as technical working arm of the Ministry of ATM, were important steps towards developing and implementing policy frameworks on a number of issues, such as the development of an Environmental Legislative Framework and guidelines for the development of an Environmental and Social Impact Assessment. Although the Environmental Legislative Framework is still in the constitutional process, the guidelines of the ESIA are widely used in the logging, mining, energy and agricultural sectors, which prove the fact that these guidelines are accepted by national and international organizations, industrials and multinationals.

The overall objective of the environmental and social assessment of readiness activities is to gain in-depth information on the quality of the environment and the socio-economic status when implementing REDD+ activities. The SESA's will be focusing on a cumulative assessment of the impact of REDD+. Effective and efficient mitigation measures and the enhancement of economic development will also be taken into account**.** The SESA protocols that are compliant with the World Bank safeguard policies will be defined in the first stage of the RPP process, coordinated by the NRWG and executed by NIMOS as well as monitored by third parties.

Insert the ToR for the SESA

The execution of the SESA will consider the following activities:

Phase 1:

1. The identification of key environmental and social issues related to the forest sector and REDD. Through this research, vulnerability issues will be considered to come to mitigation measures.
2. Assessment of the capacities of existing institutions to manage key environmental, social and vulnerability issues. This assessment will provide information on capacity building needs for example in -depth training, infrastructure improvements and personnel.
3. A SWOT analyses will be conducted on the activities of the REDD program considering environmental, social, political and economic issues.
4. Benefit/costs analyses will be conducted on the SESA outputs.

The outcome of abovementioned assessments will lead towards the development of mitigation, risk management and capacity building measures, which will be needed for the

execution of phase 2.

Phase 2:

The outcomes of phase 1 will lead to the implementation of the results of SESA. The following activities are considered:

1. Capacity and institutional strengthening of existing institutions and systems.
2. Adjustment and strengthening of regulatory frameworks.
3. Formulation of environmental and social management frameworks consistent with World Bank safeguard policies.

Abovementioned activities will be conducted through intensive consultation and participation of all relevant organizations and institutions. All assessments will consider the World Bank safeguard policies. The assessments will be conducted by national consultants, where necessary with the support of international consultants, in collaboration with relevant governmental and non-governmental institutions.

Schedule and sequencing of activities

Activities	**Year 1**	**Year 2**	**Year 3**	**Year 4**
The identification of key environmental and social issues related to the forest sector and REDD.	X	X		
Assessment of the capacities of existing institutions to manage key environmental, social and vulnerability issues.	X	X		
SWOT analysis of the REDD program	X	X		
A cost/benefit analysis of the SESA outputs.	X	X		
Development of mitigation, risk management and capacity building measures		X		
Capacity strengthening of existing institutions and systems through training	X	X		
Adjustment and strengthening of regulatory frameworks.	X	X		
Formulation of environmental and social management frameworks consistent with the World Bank safeguard policies	X	X		
Consultations and participation	X	X		
Monitoring by the independent monitoring body	X	X		

Table 2d: Summary of Social and Environmental Impact Budget						
Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
The identification of key environmental and social issues related to the forest sector and REDD.	Identification of environmental and social issues by local consultants. Conduct meetings and research with assistance of international consultants	200.00	150.00			**350.00**
Assessment of the capacities of existing institutions to manage key environmental, social and vulnerability issues.	Field research are conducted by local consultants	100.00	80.00			**180.00**
SWOT analysis of the REDD program	Conduct meetings and research with assistance of international consultants to come to the results of a SWOT analyses	100.00	75.00			**175.00**
A cost/benefit analysis of the SESA outputs.	Conduct meetings and research with assistance of international consultants for a cost and benefit analyses	75.00	25.00			**100.00**
Development of mitigation, risk management and capacity building measures	Conduct meetings and research with assistance of international consultants	50.00	50.00			**100.00**
Capacity strengthening of existing institutions and systems through training	Conduct meetings, training and workshops	200.00	300.00			**500.00**
Adjustment and strengthening of regulatory frameworks.	Conduct meetings, training and workshops	50.00	50.00			**100.00**
Formulation of environmental and social management frameworks consistent with the World Bank safeguard policies	Conduct meetings and workshops with assistance of international consultants	200.00	150.00			**350.00**
Monitoring by the independent monitoring body		50.00	50.00			**100.00**
Grandtotal 2d		**$1,025.00**	**$930.00**			**$1,955.00**

Component 3: Develop a Reference Scenario

Suriname conducted several activities with the aim to gain knowledge on approaches to develop a reference scenario. Within this component the focus will be on the methodologies for creating projections as well as to develop management structures taking into consideration the historic emissions level as well as the projected emissions level. This will be based on the Inter-governmental Panel on Climate Change Good Practice Guidelines (IPCC GPGs) and the use of both field data and remote sensing data.

In order to establish a reference scenario, the definition of the term forest is of great importance. The Forest Management Act 1992 gives a wide description of the definition of the term forest, viz.'All land covered with trees, shrubs and other vegetation, including beaches, herbaceous wetland and savannas, which is suitable for harvesting wood and/or for the collection of non forest timber products, including wildlife and/or used for soil protection, sustenance of the stability of the environment, or for purposes of recreation, including all land which has been reforested or which, in the opinion of the Minister of Natural Resources, may in future be unitized for such purposes excluding

a. An open field within an area of woodland, which open field is larger than a surface to be determined by state decree;
b. Land which is actually used for agriculture, mining, construction, permanent settlements or other purposes not provided for by law, provided that such use is not contrary to any locally applicable national or regional development program as referred to in the Planning Act;
c. The regions designated by virtue of the 1954 Nature Conservation Act.'

Even though covered by forest, the areas designated by virtue of the Nature Conservation Act (1954) are excluded from this definition. Furthermore, essential elements such as minimum area, minimum tree height and minimum level of crown cover are not mentioned. Because of these reasons this definition is not deemed suitable for carbon assessments.

In its forest resource assessment of 2005, the FAO uses a minimum crown cover of 10%, tree height of 5 m and area of 0.5 ha[4]. Suriname will use the definition of the FAO for the considering its measurable features. A revision of the current Forest Management Act is underway whereby among others the definition will be revised to reflect aforementioned FAO definition.

I. Assessment of the historic trend

The approach to establish an assessment of the historic trend will be as follows:
Emissions from deforestation and forest degradation activities will be assessed based on a historical reference period starting from the year 2000, using time intervals of approximately 5 years. This will be done because of lack of adequate data.

Through the establishment of a national historic trend, Suriname aims to increase

transparency, clarity and feasibility of measurements. In this way incentives can be generated for the removal of emissions, avoidance of emission and reduction of emissions. These measurements will be developed through the following:

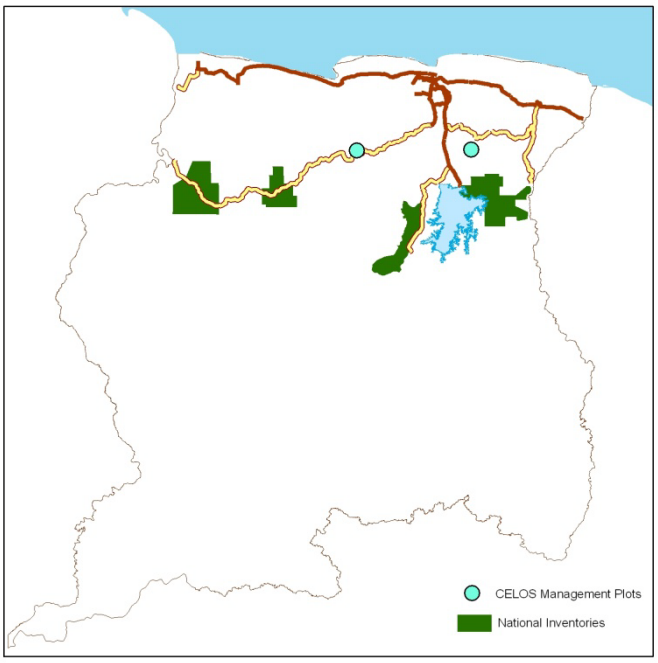
1. Stakeholders meetings for the development of measurements for transparency, clarity and feasibility as well as corrective incentives due to cross-sectoral issues that needs to be considered. The IPCC guidelines 2003 are a basis for the development of these measurements.
2. All relevant stakeholders will have public access to all documents. This leads towards increased transparency. Also more feedback will be given on the documents through e.g stakeholders meetings.
3. Another manner to come to clarity and transparency are the monitoring activities that will be done by the independent monitoring committee.

It should be considered that a conservative approach, or avoiding over-or underestimations, is recommended by the IPCC. To reach a conservative approach data on uncertainty are highly needed (see clarification in point 1. Need for new data).

Currently, the SBB, CELOS and TBI in collaboration with Alterra Wageningen University, are carrying out a project on the assessment of the aboveground biomass for the different forest types of Suriname. The following analysis was done:

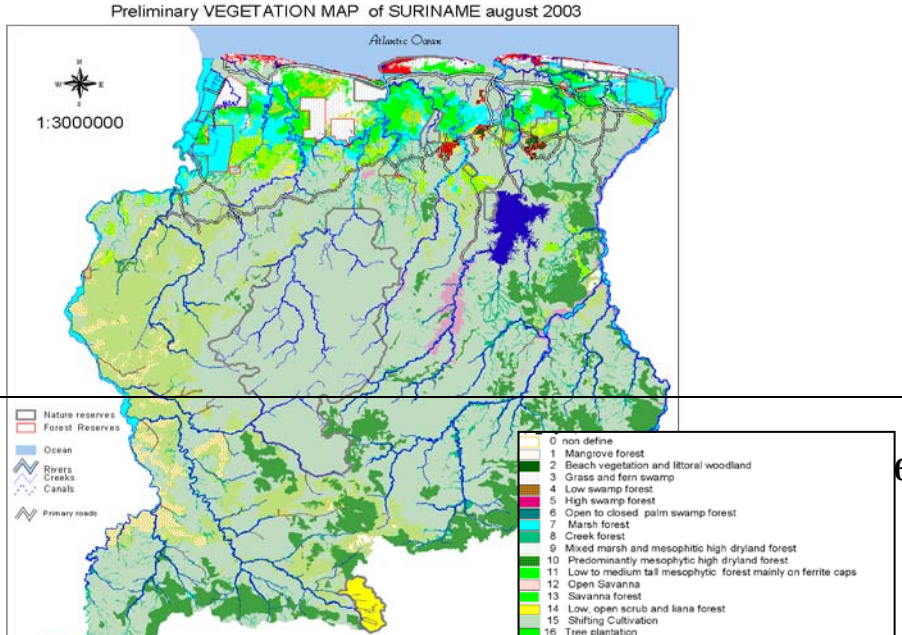
- **Inventory of the existing data:**
    1. National forest inventory data carried out by the Government of Suriname with assistance of the UNDP and the FAO:
        - 1971-1974: in the regions Kabalebo, Fallawatra and Nassau, covering a total area of 334,000 ha (FAO, 1974);
        - Early eighties in the proximity of the village Pokigron covering an area of approximately 89,000 ha .
    2. Data from the CELOS management plots established since 1965 (Kabo experiment and Mapane plots) with available information on the impact of different logging intensities and silvicultural treatments, belowground biomass, soil characteristics and allometric relations.

Location of the Celos Management Plots and the National Inventory



3. Plots from Banki and Ter Steege: 18 plots located all over the northern part of the country in different forest types
4. The management inventory data available at the SBB where commercial species have been inventoried by the concessionaires
5. 30 plots established by the Department of Natural Resources and Environmental Assessment of the Centre for Agricultural Research (CELOS-NARENA) presenting different forest types.
6. Preliminary vegetation map (2003) based on Landsat images from 1998 and the formerly mentioned plots established by CELOS-Narena, using the forest type classification as described by Molenaar and Lindeman, 1957
7. Regional data (Guyana, Brazil) on wood density from Ter Steege and Chave.

Preliminary VEGETATION MAP of SURINAME august 2003



Based on these data the following analyses are being conducted:

1. Carbon stock per surface for the different forest types have been calculated;
2. Allometric equations have been established;
3. Effects of forest management on carbon stocks and carbon capacity calculated with the CO_2 fix model (Arets);
4. Assessment of the uncertainty of the IPCC default values by comparing these values with the outcome of the above mentioned analyses.

Technical staff from different governmental institutions has been trained in the use of the CO_2 fix model in the framework of this project.

- **New data to be collected:**

Actually the data available on carbon emissions in the Surinamese forest is of Tier 1 and Tier 2 level, because only limited national data is available. Uncertainty is an unavoidable attribute of the carbon stock and the area data, which will be higher if a lower Tier level would be used. The use of Tier 1 level data, whereby the emission factors are based on broad continental forest types, might result in 30-40% errors. Different Tiers can be applied to different carbon pools. As stated by the IPCC the significant sources and sinks have to be monitored with a higher Tier level. (GOFC-GOLD, IPCC). It is recommended to assess the importance of the different carbon pools for the different forest types, because this will contribute to the cost-effectiveness, accuracy of the new field data to be collected and efficient monitoring. Forest degradation will be considered as 'forest land remaining forest land' (IPCC). Assessments will be made to establish the method to be applied.

1. New field data

In the further course of the project, new plot data will be collected to improve the biomass estimations. The national inventories carried out in the seventies and eighties were meant to assess the potential for sustainable logging in the accessible regions of the country. Amongst others Suriname might focus on the development of new plots in the difficult accessible southern part, where not much research has been done, while a high carbon sink is expected. For the design of plots, a study is planned for march 2010 to study the most appropriate types of plots for biomass monitoring. Methods such as the RAINFOR plots which would be part of the Amazonian network to monitor biomass[1] as well as the methodology developed by Alder and van Kuijk[i] will be considered.

2. New remote sensing data

[1] Malhi, Y., Phillips, O.L. et al. An international network to understand the biomass and dynamics of Amazonian forests (RAINFOR). 2002. *Journal of Vegetation Science* 13: 439-450.

- A **benchmark forest cover map** will be created for Suriname based on RADAR data from the Japanese –US sensor ALOS. Suriname plans to update the forest cover map as well as compare the forest cover change every two years. A high level of technical and financial support will be required to build the capacity to establish in-country monitoring.
- **Historical deforestation rates**: optical satellite images with a medium resolution will be obtained for the historical reference period, mainly in the proximity of areas classified as deforested on the benchmark forest area map.

II. Approaches for reference scenario future projections:

Conduct modeling for future projections. The focus will be on national and international economic trends and reference scenario projections into future deforestation and forest degradation. The outcomes of the land-use planning, analysis of the drivers for deforestation and forest degradation (component 2a) and future developments (component 2a) will be taken into account. The focus will be on:

- Deforestation: forest area change
- Forest degradation: biomass and carbon dynamics

One of the important training components is focusing on future emission projections.

At present a group of staff members of key institutions are trained in spatial planning. There are plans to expand this training to include other institutions. The Cedergren report 'Measurement and Reporting of Forest Carbon in Suriname: Preparing for REDD Implementation' gave a preliminary description on institutional development, capacity building, and knowledge gaps which provides a concise overview of the capacity of several institutions. Annex 8 presents a summary of the institutional development, capacity building, and knowledge gaps according to Cedergren

Schedule and Sequencing of activities

	Year 1	Year 2	Year 3	Year 4
Collect review and assess information related to forest inventories and sample plots	X	X		
Review all methodologies	X	X		
Revision of the definition of the forest	X	X		
Development of forest area maps	X	X	X	
Design and adjust (new) plots and stratification	X	X		
Measurement in the experimental plots	X	X	X	
Review and adjust the forest inventory and land use matrix based on the field data collected		X	X	
Forest inventory development and carbon stock estimations		X	X	

Future carbon emissions estimation		X	X	X
Capacity building of institutions	X	X	X	X

[I1]Alder D. and Kuijk van M. (2009) Proposals for a national biomass national forest biomass monitoring network in Guyana.

[iii] S.Brown, F.Archard et al. Reducing GHG emissions from deforestation and degradation in developing countries: a surce book of methods and procedures for monitoring, measuring and reporting. GOFC-GOLD.

[4]FAO. Global forest resources assessment.Country reports Suriname.2005.

Table 3: Summary of Reference Scenario Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	Total
Collect review and assess information related to forest inventories and sample plots	Hire team of local and international consultants, conduct workshops, meetings, field research, mapping.	6.00	6.00			**12.00**
Review all methodologies		10.00	10.00			**20.00**
Revision of the definition of the forest		6.00				**6.00**
Development of forest area maps		250.00	100.00			**350.00**
Design and adjust (new) plots and stratification and measurement in the experimental plots		250.00	100.00	100.00	100.00	**550.00**
Review and adjust the forest inventory and land use matrix based on the field data collected		100.00	50.00	10.00	10.00	**170.00**
Forest inventory development and carbon stock estimations		75.00	75.00	75.00		**225.00**
Future carbon emissions estimation		50.00	50.00	30.00		**130.00**
Capacity building of institutions		$10.00	$10.00	$10.00	$10.00	**$40.00**
Monitoring by the independent monitoring body		$50.00	$50.00	$50.00	$10.00	**$160.00**
Grandtotal 3		**$2,817.00**	**$451.00**	**$275.00**	**$130.00**	**$3,673.00**

Component 4: Design a Monitoring System

The development of a national monitoring system for measuring, reporting and verifying (MRV) emission reductions and removals of greenhouse gases is important to demonstrate credible reductions in deforestation and forest degradation. In the previous components it is mentioned that assessments as well as SESA's will be carried out. The identification of key drivers of deforestation, the effects on the environment, the mitigation measures and the monitoring measures are some of the results of the research.

The objective of the national monitoring system is to conduct activities to come to accurate and consistent datasets of forest area change monitoring, as well as carbon stock and carbon stock change estimation monitoring.

The following activities will be conducted to come to a national monitoring system:

1. **Assessment of existing monitoring capacities.** Although the above-mentioned report gave an overview of the current status and recent trends of resources, capacities, technologies and data about existing monitoring systems in Suriname, it is important to conduct an in-depth assessment, which is crucial for institutions to strengthen their relevant capacities for existing forest data and monitoring systems and to come to a feasible and effective design plan. The assessment will inclusively focus on:
    a. Roles and responsibilities of relevant institutions and their linkage with MRV;
    b. Current resources (financial and knowledge) of relevant institutions regarding MRV. The assessment will consider the national REDD+ actions and monitoring challenges.
    c. Current technologies (hardware and software) of relevant institutions regarding MRV. In-depth assessment will focus on all relevant institutions that have technologies and capacities for the MRV, as well as remote sensing technical challenges.
    d. Current national, regional and international collaboration. Besides the Foundation for Forest Management and Production Control (SBB) and CELOS-NARENA, other private organizations and researchers are also conducting monitoring activities. However, there is few information available and or disseminated about the type and the frequency of monitoring.
    e. Current forest inventory capacities. The focus will be on the growing stock and biomass. Suriname has already conducted forest inventories, which is explained in component 3. However, the inventories were less focused on growing stock, biomass and carbon pools.

2. **Assessment of future capacities.** After abovementioned assessments have been conducted, the relevant institutions will be scaled up through training, workshops, field research and information dissemination, as well as institutional strengthening where necessary.

3. **Increase of knowledge and expertise** within institutions through training, workshops, meetings, seminars and dissemination of information. To come to an effective national monitoring system, capacity building is needed for the following themes:
    a. United Nations Framework Conventions on Climate Change (UNFCCC) REDD+

process;
   b. Intergovernmental Panel on Climate Change (IPPC) Good Practice guidelines;
   c. Processing and interpreting remote sensing data
   d. GIS analysis; and
   e. Measure plots, monitor biomass and carbon accounting.

In-depth assessment, institutional strengthening and capacity building are key issues for Suriname to reach the objective. After conducting these activities, the national monitoring systems will be designed through seven phases, which are also described in the report. These phases are:

1. **Planning.** The national REDD+ readiness framework and strategy are developed as described in component 2. Stakeholder meetings will be conducted, and dissemination of information will take place to come to a better understanding of the UNFCCC and REDD+ process, as well as of the MRV and the importance of a national monitoring system. A detailed time schedule with its goals and activities will be developed as described in component 1b. Component 1b also mentioned the assessment and capacity building of local, Indigenous and Maroon people to be incorporated and be part of the monitoring system.
2. **Design**. The design of a national monitoring program will be presented. The results from the assessment will be of great importance to come to an effective design whereby continuity is highly desired. At this stage the following programs will be developed:
   a. A plan for institutional capacity building and short/long term improvement;
   b. A budget and cost estimation for institutional strengthening, capacity building and implementation of the national monitoring program;
   c. An audit system for the determination of the capacity of (governmental) institutions conducting MRV.

3. **Data collection and monitoring: forest area change.** The results from the land use assessment described in component 2a will be studied to have a good understanding of the drivers of deforestation and forest degradation. All relevant existing data and information will be reviewed and consolidated. Existing historical data will be reviewed in depth, to make a distinction between sufficient and insufficient data. Suriname can access to different data, such as remote sensing data, aerial photographs, historical Landsat and CBERS data, and limited cloud-free SPOT coverage. Radar data (ALOS) and optical data that are processed and analyzed with support from the Netherlands (Wageningen University and SARvision) are also available.

4. **Data collection and monitoring: carbon stocks changes.** Suriname does not possess sufficient knowledge and experience with carbon stock monitoring. According to the report, Suriname needs to set up a continuous, systematic and standardized national inventory approach to quantify above-/belowground carbon and soil carbon. The development of a national inventory is already described in component 3. However, specific activities will be conducted to come to a complete data collection and monitoring program for carbon stock changes. The activities recommended by the report, are:
   a. Capacity building, as described in activity 3;
   b. Identification of national carbon stock key categories;
   c. Develop country specific sampling design and stratification;
   d. Implement field sample plots to derive the following parameters:
      i. Allometric data (for biomass conversion and expansion);
      ii. Carbon fraction values considering country-specific stratification.

5. **Data collection and monitoring from biomass burning**. Slash-and-burn agricultural activities occur in the hinterland of Suriname, but there is little information available on the rate of activities. Through assessment, an efficient monitoring program will be developed to measure emissions from the burning of biomass. Data of active fire and burned areas will be collected and analyzed for sufficiency, as well as continuous in-situ measurements for emission factors.
6. **Accuracy assessment, verification and data treatment.** Suriname has very little experience with this. Capacity building will help to make (governmental) institutions ready for accurate and transparent verification. The training program will focus on the following:
    a. Error sources and uncertainties in the assessment process;
    b. Statistical methods to quantify, report and analyze;
    c. Techniques to gather, store and analyze data;
    d. Data analysis;
    e. Data interpretation;
    f. Information technology (hard and soft ware);
    g. Data for spatio-temporal processes affecting forest change, socio-economic drivers, spatial factors, forest management, land use practices and spatial planning;
    h. Spatial and temporal analysis; and
    i. Modeling tools.
7. **Regular updating of the reference emission level/reference level.** Component 3 gives a full description about the development of the reference scenario. However, the reference emission level/reference level needs to be verified and upgraded regularly.

Schedule and sequencing of activities.

Activities	Year 1	Year 2	Year 3	Year 4
Assessment of existing monitoring capacities	X			
Assessment of present and future capacities	X	X		
Increase of knowledge and expertise	X	X	X	X
The design of the national monitoring systems:				
Planning……	X	X		
Design……..	X	X	X	X
Data collection and monitoring: forest area change……..	X	X	X	
Data collection and monitoring: carbon stocks changes……..	X	X	X	
Data collection and monitoring from biomass burning……..	X	X	X	
Accuracy assessment, verification and data treatment……..	X	X	X	X

Table 4: Summary of Monitoring Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
Assessment of existing monitoring capacities		7.00				**7.00**
Assessment of future capacities		40.00				**40.00**
The design of the national monitoring systems	Hire team of international consultants, conduct workshops, meetings, field research, mapping					
	Planning	10.00	5.00			**15.00**
	Design					
	Data collection, measurements and monitoring	100.00	100.00			**200.00**
	Data collection, measurements and monitoring: carbon stocks changes	100.00	50.00			**150.00**
	Data collection, measurements and monitoring from biomass burning	100.00	50.00			**150.00**
	Accuracy assessment, verification and data treatment		70.00	50.00		**120.00**
	Expert consultation and training	200.00	100.00	100.00		**400.00**
Monitoring by the independent monitoring body		50.00	50.00	10.00		110.00
Grandtotal 4		**$607.00**	**$425.00**	**$160.00**		**$1,192.00**

Component 5: Schedule and Budget

Each component presents a detailed budget of activities to be conducted. In this component a summary of the total budget is presented for the implementation of the RPP.

The total budget is **U$D 21,250,000.00**

GRAND TOTAL RPP	
	Estimated Cost in U$D (in thousands)
Component 1a: National Readiness Management Arrangements	**1,677.00**
Component 1b: Stakeholder Consultation and Outreach Plan	**8,480.00**
Component 2a: Assessment of Land Use, Forest Policy and Governance Activities	**863.00**
Component 2b: Strategy Activities	**1,810.00**
Component 2c: Implementation Framework Activities	**1,225.00**
Component 2d: Social and Environmental Impact Activities	**1,955.00**
Component 3: Reference Scenario Activities	**3,673.00**
Component 4: Monitoring Activities and Budget	**1,192.00**
Component 6: Program M&E Activities and Budget	**375.00**
TOTAL	**$21,250.00**

Each component represents a list of activities which is included as a summary in this component.

Activities	Year 1	Year 2	Year 3	Year 4
Component 1a				
Establishment of the National REDD+ Working Group, the National Forest Carbon Unit, the Subunits and the Independent monitoring body	x			
Gathering information on REDD+ issues and establishing a databank	x	x	x	x
Formulation of a national REDD+ policy	x	x	x	x
Mainstreaming of REDD+ issues into the MOP and national policy	x	x	x	x
Development of training programs and time schedules for training, meetings and workshops regarding technical issues of implementation of RPP and REDD+ readiness strategy	x	x	x	
Dissemination of information	x	x	x	x
Monitoring and recordkeeping of all results and data	x	x	x	x
Coordination of consultation and participation plan	x	x	x	x
Component 1b				
Development and execution of the consultation and participation plan	x	x	x	x
Capacity building and institutional strengthening identified for relevant groups and communities.	x	x	x	x
Assessment will be needed for the capacity of villagers and their relevant organizations and the develop a relevant capacity building and institutional strengthening program.	x	x		
Awareness workshops and training will be conducted for all interested parties and the structures of the different traditional tribal authorities and representatives of traditional Indigenous and Maroon communities as well as local organizations.	x	x	x	x
Awareness workshops and training will be conducted for local media to disseminate	x	x	x	x

information to the target groups according to the Consultation and Participation Plan				
Development of FPIC guidelines for the implementation of REDD+ according to national circumstances.	x	x		
Establishment of a feedback mechanism.	x			
Monitoring of all activities by the NRWG and independent monitoring body.	x	x	x	x
Component 2a				
Quantitative assessment of land use, drivers of deforestation and forest degradation, the social and environmental effects;	x	x	x	x
Assessments of the effects of activities of the drivers of deforestation and degradation on the overall carbon emissions and the development and implementation of safeguards against unplanned carbon emissions.	x	x		
Assessment and revision of relevant policies and regulations to reduce deforestation and forest degradation;	x			
Assessment of institutional capacities and capabilities considering the economic, social, political, environmental context;	x			
Assessment of institutions with respect to monitoring of deforestation and forest degradation, as well as enforcement of regulations;	x			
Assessment of direct and indirect drivers and factors inside and outside the forest sector, as well as other issues affecting REDD+;	x	x		
Identification of land tenure, other resources affecting REDD & strengthening the land administration	x	x	x	x
Establish mitigation measures for effective policy implementation or development with due account for REDD+;		x	x	
Establish mitigation measures for effective monitoring and enforcement;		x	x	x
Establish programs for capacity building and institutional strengthening;		x	x	x
Establish mitigation measures to reduce current and future deforestation and forest degradation through the implementation of a REDD+ strategy ;		x	x	

Research on the impact of social, economic and political to implement taxation and revenues measures	x	x	x	
Costs and potential funding sources analyses.		x	x	
Monitoring by the independent monitoring body	x	x	x	x
Component 2b				
Conduct assessment to address interrelated social, political, and economic drivers of deforestation and forest degradation at the national level	x	x		
Develop a reference emission level or reference level based on future economic growth (adjustment factor)	x	x	x	
Design transparent financial structures for an equitable distribution of forest carbon benefits		x	x	x
Develop a national forest carbon financial plan revenue		x	x	x
Develop a national-level forest carbon inventory based on IPCC guidelines	x	x	x	
Develop a national-level permanent forest carbon monitoring methodology;	x	x	x	
Develop a methodology for projection and modeling of future emissions from deforestation and forest degradation		x	x	x
Develop a national Reference Emission Level (REL) or Reference Level	x	x	x	
Develop a national Monitoring, Reporting and Verification (MRV) system with due account for GIS and remote sensing	x	x		
Develop a national forest carbon database	x	x		
Develop a forest carbon rights regulatory framework	x	x		
Monitoring by the independent monitoring body	x	x	x	x
Component 2c				
Development of institutional frameworks for social, economic and legal arrangements, as well as programs for increased institutional capacity	x	x		
Assessment of forest carbon trading mechanism	x	x	x	
Design and implement a national funding/ benefit sharing mechanism	x	x	x	
Design and implement a national forest carbon	x	x		

accounting system				
Design and implement a mechanism to target financial incentives for REDD+	x	x		
Design and implement a system to verify findings and ensure reliability and accuracy, as well as its protocols	x	x		
Design and implement a REDD+ networking mechanism	x	x		
Develop a REDD+ reporting structure		x	x	
Develop a plan for capacity building and technology transfer		x	x	
Disseminate information to all stakeholders	x	x	x	x
Stakeholder consultations	x	x	x	x
Monitoring by the independent monitoring body	x	x	x	x
Component 2 d				
The identification of key environmental and social issues related to the forest sector and REDD.	X	X		
Assessment of the capacities of existing institutions to manage key environmental, social and vulnerability issues.	X	X		
SWOT analyses of the REDD program	X	X		
A cost/benefit analyses of the SESA outputs.	X	X		
Development of mitigation, risk management and capacity building measures		X		
Capacity strengthening of existing institutions and systems through training	X	X		
Adjustment and strengthening of regulatory frameworks.	X	X		
Formulation of environmental and social management frameworks consistent with the World Bank safeguard policies	X	X		
Consultations and participation	X	X		
Monitoring by the independent monitoring body	X	X		
Component 3				
Collect review and assess information related to forest inventories and sample plots	x	x		
Review all methodologies	x	x		
Revision of the definition of the forest	x	x		

Development of forest area maps	x	x	x	
Design and adjust (new) plots and stratification	x	x		
Measurement in the experimental plots	x	x	x	
Review and adjust the forest inventory and land use matrix based on the field data collected		x	x	
Component 3				
Forest inventory development & carbon stock estimations		x	x	
Future carbon emissions estimation		x	x	x
Capacity building of institutions	x	x	x	x
Monitoring by the independent monitoring body	x	x	x	x
Component 4				
Assessment of existing monitoring capacities	x			
Assessment of present and future capacities	x	x		
Increase of knowledge and expertise	x	x	x	x
The design of the national monitoring systems: Planning…… Design…….. Data collection and monitoring: forest area change…….. Data collection and monitoring: carbon stocks changes…….. Data collection and monitoring from biomass burning…….. Accuracy assessment, verification and data treatment……..	 x x x x x	 x x x x x	 x x x x	 x x
Monitoring by the independent monitoring body	x	x	x	x
Component 6				
Stakeholders meeting regarding the M&E program	x	x		
The development of the M&E Program Framework	x	x		
Development of a training manual for the M&E Program and conduct the training.		x		

Identification for independent verification.		x		

Component 6: Design a Program Monitoring and Evaluation Framework

Rationale

According to the RPP guidelines, component 6 is optional. Therefore, Suriname presents within this component the basis for the development of a framework for the National Monitoring and Evaluation (M&E) Program. The M&E Program is a nationally organized effort to deliver socio-economic services to target efficient and transparent management of Suriname's resources. The level of program evaluation is focused on national and sub-national sites. To perform activities in this program, skills and resources are required such as, research, statistical data analyses, special software to perform modeling and evaluation and policy analysis and report writing. Through stakeholders meeting the program monitoring and evaluation framework will be developed.

The goal of the National M&E Program framework is to develop a sustainable monitoring, evaluation and reporting framework for the REDD+ readiness strategy.

Summarize your proposal

The overall purpose of monitoring and evaluation is to track changes in program performance over a certain time and to attribute program outcomes to their causes. The M&E Program is a continuous cycle of participation and communication and it promotes learning and adaptive management in response to progressive monitoring and evaluation. This leads to improvement of designed programs and achievements.

The development of a National Monitoring and Evaluation Program framework is the responsibility of the NRWG, which assesses the performance of the implementation of the RPP and the REDD+ readiness strategy.

The objective of the M&E Program framework is to create steps for the achievement of REDD+ readiness goals and continuous performance. It is also intended to give guidance on the development and implementation of evaluation plans.

To come to a National M&E Program Framework, the following will be considered:

1. Development of the program logic to determine when and what to evaluate, so that existing or available resources can be used effectively and efficiently. A model will assist in developing appropriate processes and outcome measures. The development of the program logic will take the following into consideration:
    a. Key evaluation questions and methods;
    b. Performance of indicators.
    c. Targets for outcomes;
    d. The desired changes expected on national and sub-national levels.
2. Monitoring in the context of the M&E Program ensures that appropriate data is

available to assess and to track changes in program performance over time. Monitoring involves the collection and analysis of information to assist timely decision making and it provides the basis for evaluation and learning. The monitoring process will consider the following:

a. Development and definition of indicators to measure progress;
b. Data collection mechanisms;
c. Data analysis to determine output, outcomes and trends;
d. Data verification, validation and system clean up;
e. Reports on the monitoring results;
f. Distribution and feedback mechanisms across all relevant stakeholders.

3. Evaluation in the context of the M&E Program encompasses assessment of the REDD+ readiness strategy and it includes internal and external evaluation processes. It also attributes the REDD+ readiness program outcomes to its causes. The evaluation process will take into account:
    a. The development of assessment frameworks;
    b. Evaluation at every stage of investment, program planning and implementation;
    c. Agreement on evaluation methods;
    d. Output, outcomes and financial reports.
4. Capacity is required to conduct activities. Therefore, an assessment of institutional capacity will be carried out focusing on the existing M&E instruments and the proposed way forward for the M&E framework.
5. The development of a training manual for the M&E Program is required to build the capacity of the National Forest Carbon Unit, National REDD+ Working Group and other relevant institutions. The M&E Program framework of REDD+ performance is a responsibility of the National REDD+ Working Group, which will evaluate the performance against set goals, targets, equitableness of resource allocation, and effectiveness and efficiency.
6. Identification for independent verification.

Timeschedule and sequencing of activities

Activities	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Stakeholders meeting regarding the M&E program	X	X		
The development of the M&E Program Framework	X	X		
Development of a training manual for the M&E Program and conduct the training.		X		
Identification for independent verification.		X		
Monitoring by the independent monitoring body	X	X		

Table 6: Summary of Program M&E Budget

Main activity	Sub- Activity	Estimated Cost in U$D (in thousands)				
		2010	2011	2012	2013	**Total**
Stakeholders meeting regarding the M&E program		50	30			80.00
The development of the program M&E framework	Hire specialists (local consultants)	30.00				30.00
	Meetings	6.00				6.00
The development of a training manual for the program M&E and conduct the training.	Hire local consultants for the development of the training manual	17.00	10.00			27.00
	Expert consultation and training	15.00	15.00			30.00
	Evaluation		10.00			10.00
Dissemination of information		5.00	5.00			10.00
Monitoring by the independent monitoring body		150.00	150.00			300.00
Grandtotal 6		**$155.00**	**$220.00**			**$375.00**

Annexes (Optional)

Annex 1a: TOR National Readiness Management Arrangements

1. Establish a National REDD+ Working Group, a National Forest Carbon Unit, Subunits and an independent monitoring body
2. Incorporate REDD + into the MADP and mainstream REDD+ with national policies.
3. Formulate a national REDD+ policy
4. Design a mechanism to gather all relevant information and disseminate it to and from the National REDD+ Working Group, National Forest Carbon Unit, subunits and all relevant stakeholders.
5. Develop an efficient time schedule to conduct training programs for the implementation of the RPP and REDD+ readiness strategy, with due consideration for the tasks of the National REDD+ Working Group and the National Forest Carbon Unit.

Annex 1b-1: Stakeholder Consultations

The report will be attached as a separate document

Annex 1b-2: Consultation and Participation Plan

Villages in Suriname (source: Statistic Bureau)

This annex represent the original lists of the total number of villages in Suriname. This list is produced by the Statistic Bureau

Dorpen per Ressort.xls

DORPEN PER RESSORT IN SURINAME

DISTRIKT	RESSORT	DORPEN van NOORD naar ZUID
Saramacca	Tijgerkreek	geen
	Calcutta	Batavia, Kalebaskreek
	Kampong Baroe	Maho, Totokamp
	Groningen	Columbia, Grankreek
Marowijne	Albina	Erowarte,Tapoehoekoe,Bamboesi,Pierrekondre,Marijkedorp,
		Alfonsdorp,Papatamkondre,Manjabon,Onikaikondre,Bilokondre,
		Akoljolkondre,Bigiston
	Galibi	Galibi,Langamankondre,Christiaankondre
	Moengo	Ricanaumofo,Palatakondre,Tangnanga lanti,Akoejoetoe kondre,
		Happyland,Peto Ondro,Abadoekondre,Bematie Mofo,Akalekondre
		Kraboeholo,Pelgrimkondre,Morakondre,Dang Tapoe
	Moengo Tapu	Toekopie,Adjoemakondre,Moengo Tapoe
	Patamacca	Ovia Olo,Kasabaondro,Patamacca,Lemtjibon,Sokekondre,
		Santoniadorp,Apaikondre,Mopikondre,Pakirakondre,Maria's Hope
	Wanhatti	Wanhatti,Calbo,Lantiwee,Pinatjarimi,Pikinsanti,Tamarin,
		Langa Oekoe 1+2,Malokokondre,Manjabon
Para	Bigi Poika	Bigi Poika,
	Carolina	Pierrekondre,Redi Doti,Cassipora
	Noord	Bernharddorp
	Oost	Powakka
	Zuid	Witsanti,Hollandsekamp,Cabendadorp,Matta,Pikin Saron
Brokopondo	Centrum	Victoria,Boslanti,Asigron,Drepada,Tapoeripe,Compagniekreek I+II
		Bailingsoela,Brokobaka, Afobaka
	Brownsweg	Nw.Koffiekamp,Birihoedoematoe,Makambi,Nw.Gansee,Kadjoe,
		Djankakondre,Wakibasoe I+II
	Klaaskreek	Kapasikele,Moejekreek,Klaaskreek,Nw.Lombe
	Kwakoegron	Kwakoegron,Commissariskondre,Makakriki,
	Marchalkreek	Phedra,Rama,Eendracht,Alasabaka
	Sarakreek	Lebidoti,Bachoe,Pisjan,Doewatra,Baikoetoe,
		Pikinpada,Banafoekondre,Bekiokondre

Dorpen per Ressort.xls

ISTRIKT	RESSORT	DORPEN
ipaliwini	Boven Coppename	Corneliskondre,Donderskamp,Kaaimanston,
		Wayambo,Witagron
	Boven Saramacca	Baling,Bethel,Boslanti,Kwatahede,Makaja pingo,
		Misalibi,Nw.Jacobkondre,Bilawatra,
		Padua,Paka Paka,Pijeti,Piniel,Poesoegroenoe,
		Soekibaka,Tevreden,Vertrouwen,Wanhatti
	Boven Suriname	Abenaston,Adawai,Akisamaw,Akwawkondre
		Amakakondre,Asidonhopo,Asawbasoe,
		Begron,Bendikwai,Bendiwatra,Pamboko 1en II,
		Bofroekoele,Botopasi,Danpati,Dan,
		Dawme,Debike,Deboo,Djindjeston,Djoemoe
		Futunakaba,Godowatra,Godoholo,Goejaba,
		Gunsi,Grantatai,Granslee,Hekpenoenoe,
		Jawjaw,Kajana,Kajapatie,Kambaloewa,
		Konoi,Dangogo I en II,Kroetoetin,Laduani,
		Tjalikondre,Ligorio,Lispansi,Maisiakriki,
		Malobi,Nw.Aurora,Paloeloebasoe,Penpen
		Pikinslee,Pokigron, Semoisi,Solang,Ston-oekoe
		Toemanpa,
	Coeroeni	Allalapadu,Coeroeni,Kwamalasamutu, Sipaliwini
	Kabalebo	Apoera,Washabo,Section,
	Tapanahony	A dosiang I en II,Anapaike(Kawemhakan),
		Apetina,Benanoe,Bensdorp,Bonnidoro,
		Clementie,Cottica,Drietabbetje,Gobaja ini,
		Godoholo,Godsbazuinkondre,Granborie,
		Jamaica I en II,Jawsa,Karmel,Kisai(Duwatra)
		Langatabiki,Loka loka,Mainsie,Mankabetapoe I,II,III en VI,
		Manlobi,Mooitaki,Nason,
		Palumeu,Peleletepoe,Pikinkondre,Poeketi I en II,
		Poeloegoedoe,Polokaba,Pompiloly,
		Powi,Saaje,San ben doemi,Sangamasoesa
		Skin tabiki I en II,Stoelmanseiland,Tabikihede,
		Tabiki,Tjon tjon,Fandakie,Wanfinga,

Annex 2b: TOR REDD Strategy Options

1. Develop an assessment report for addressing the interrelated social, political, and economic drivers of deforestation and forest degradation at the national level;
2. Develop a strategy to address the interrelated social, political, and economic drivers of deforestation and forest degradation at the national level;
3. Develop a reference emission level or reference level based on future economic growth (adjustment factor);
4. Design transparent financial structures for an equitable distribution of forest carbon benefits ;
5. Develop a national forest carbon financial plan revenue;
6. Design a national forest carbon accounting system which will include the following:
    - A national-level forest carbon inventory based on IPCC guidelines;
    - A national-level permanent forest carbon monitoring methodology;
    - A methodology for projection and modeling of future emissions from deforestation and forest degradation;
    - A national Reference Level;
    - A national Monitoring, Reporting and Verification (MRV) system with due account for GIS and remote sensing;
    - A national forest carbon database;
    - A forest carbon rights regulatory framework.
7. Develop project demonstration activities, taking into account land use and reversing deforestation and forest degradation trends that promote alternative livelihoods;
8. Establish clear standards to make forest carbon credits easily tradable and bankable;
9. Conduct training and consultation meetings to inform, build capacity, set up collaboration within governmental and non-governmental institutions to manage the REDD+ readiness strategy.

Annex 2c: TOR REDD+ Implementation Framework

1. Develop an assessment report on policy, legal and institutional settings;
2. Develop an assessment report on forest carbon trading mechanisms;
3. Design a system to verify findings and ensure reliability and accuracy;
4. Develop criteria for the selection of REDD+ demonstration sites and pilot activities;
5. Develop a plan for capacity building and technology transfer;
6. Establish a national REDD+ readiness framework with its components:
    a. Baseline determination
    b. Verification measures
    c. Monitoring and regular reporting
    d. Forest Carbon financial mechanisms

e. Stakeholder consultations and engagement
f. Institutional arrangements: social, economic, legal and governance
g. Capacity building and research
h. Dissemination of information and networking
i. Submissions of REDD+ proposal
j. Forest carbon market access
k. Demonstration sites and the criteria for selection
l. Pilot activities

Annex 2d: TOR Social and Environmental Impact Assessment

1. Identify key environmental and social issues related to the forest sector and REDD.
2. Conduct assessments of the capacities of existing institutions to manage key environmental, social and vulnerability issues.
3. Conduct SWOT analyses and benefit/costs
4. Development of mitigation, risk management and capacity building measures
5. Adjust and strengthen regulatory frameworks.
6. Formulate environmental and social management frameworks consistent with the World Bank safeguard policies

Annex 3: TOR Reference Scenario

1. All relevant data will be obtained, reviewed and analyzed to be used for the development of a national reference scenario. All data will be recorded in the National Forest Carbon Databank
2. Collect review and assess information related to forest inventories and sample plots
3. Design and adjust (new) plots and stratification
4. Develop forest area maps
5. Conduct field inventories and surveys
6. Review and adjust the forest inventory and land use matrix based on the field data collected

Annex 4: TOR Monitoring System

1. Develop an assessment report of current and future monitoring capacities.
2. Develop a national monitoring system including:
    a. forest area change,
    b. carbon stocks,
    c. biomass burning

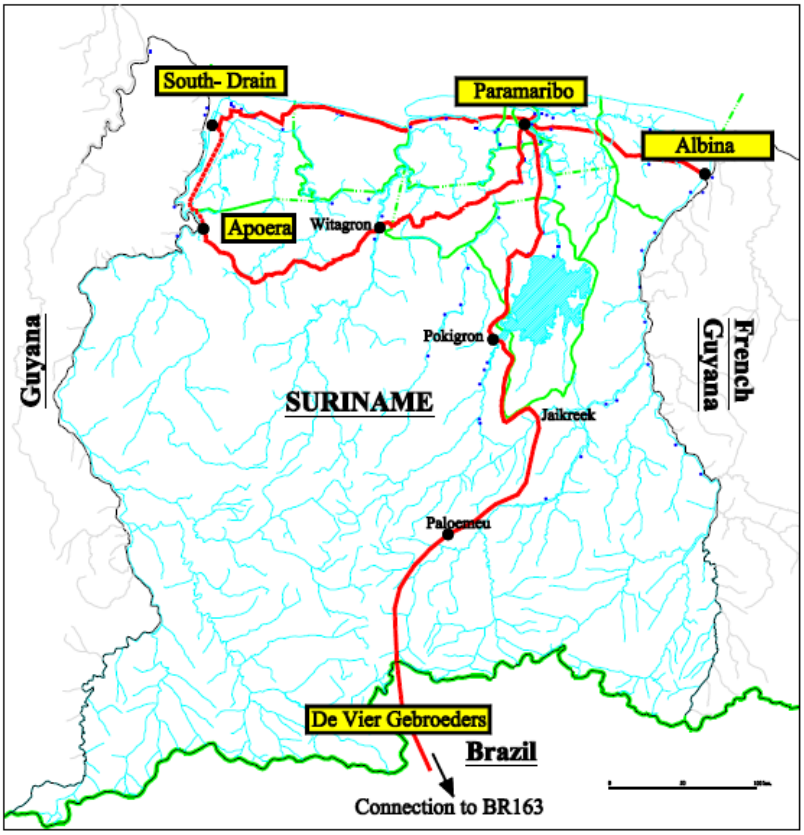
d. accuracy, verification and data treatment

Annex 6: TOR Program Monitoring and Evaluation (Optional)

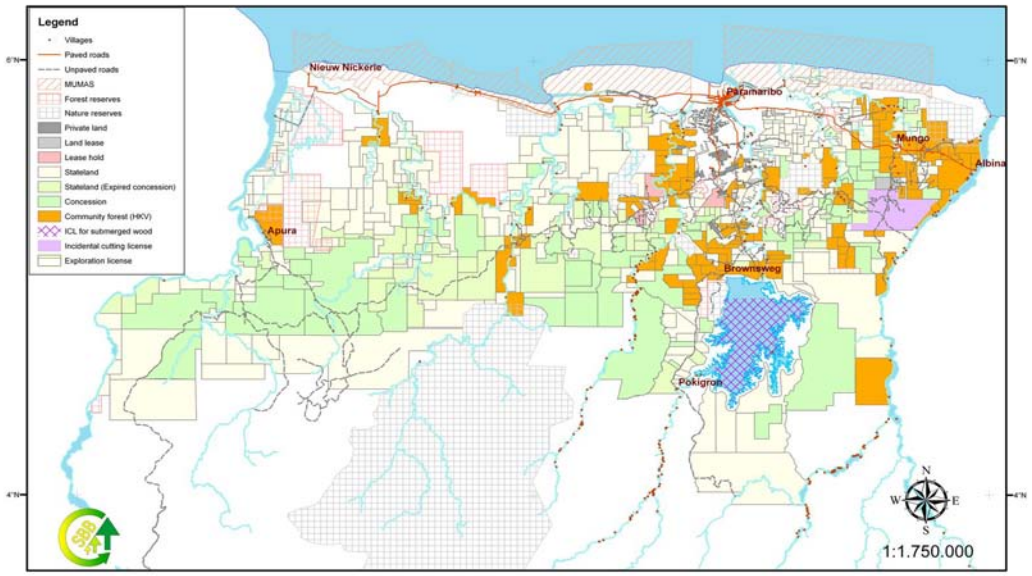
1. Conduct a stakeholders meeting regarding the M&E program
2. Develop a program logic considering:
    a. Key evaluation questions and methods;
    b. Performance of indicators.
    c. Targets for outcomes;
    d. The desired changes expected on national and sub-national levels.
3. Develop strategies for the M&E Program
4. Develop an M&E Program Framework
5. Develop training manual for the M&E Program.

Annex 7 MAPS

Proposed route of the IIRSA project

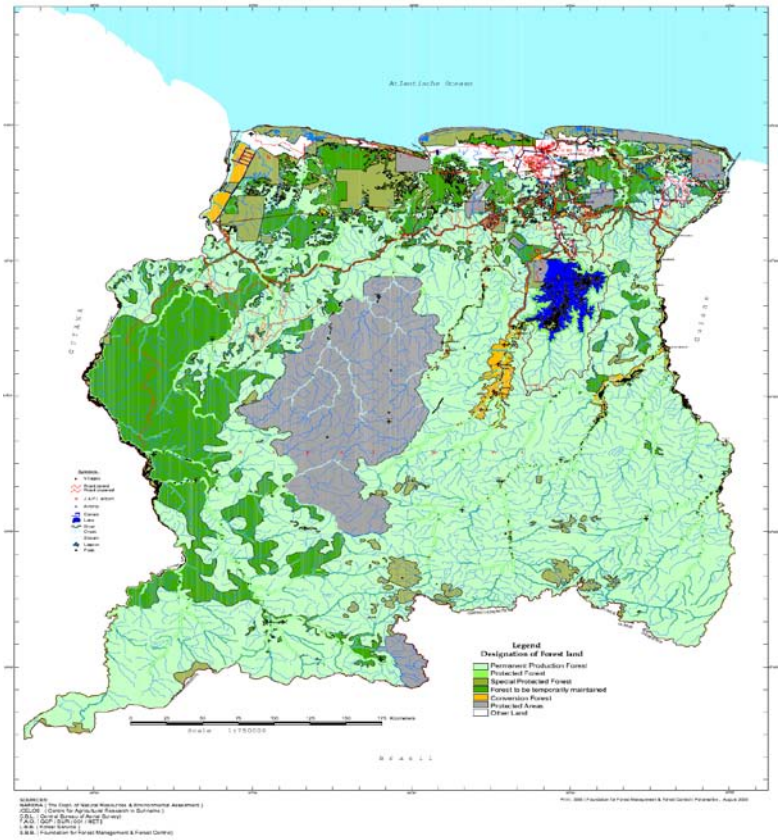


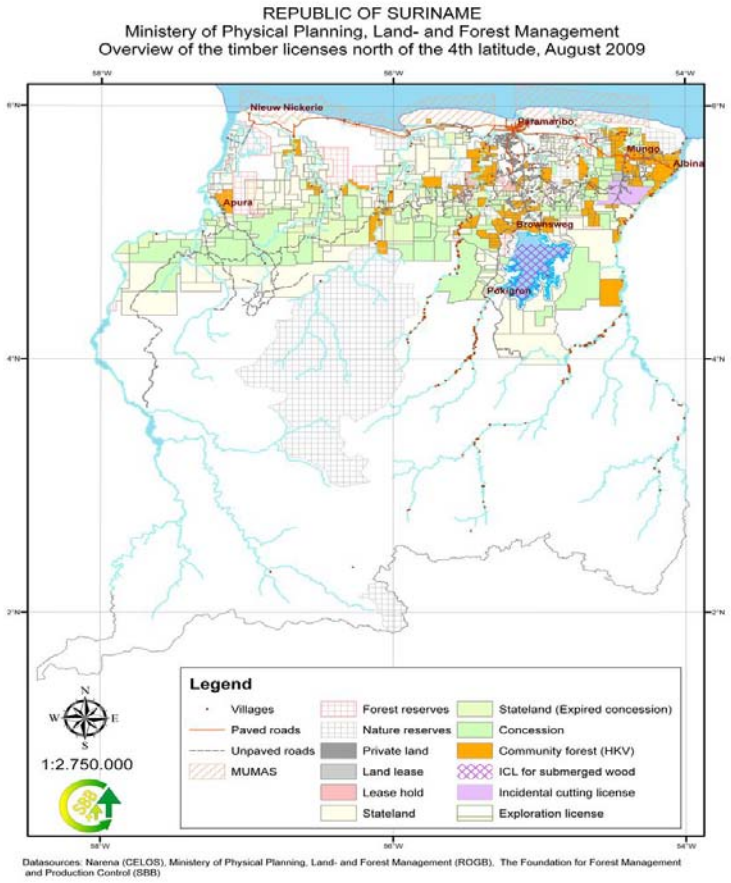
REPUBLIC OF SURINAME
Ministery of Physical Planning, Land- and Forest Management
Overview of the timber licenses north of the 4th latitude, August 2009



Datasources: Narena (CELOS), Ministery of Physical Planning, Land- and Forest Management (ROGB), The Foundation for Forest Management and Production Control (SBB)

Indicative Forest Classification Map of
the Republic of SURINAME




REPUBLIC OF SURINAME
Ministry of Physical Planning, Land- and Forest Management
Overview of the timber licenses north of the 4th latitude, August 2009
58°W
56°W
54°W
6°N
4°N
2°N
Nieuw Nickerie
Paramaribo
Mungo
Albina
Apura
Brownsweg
Pokigron
Legend
Villages
Paved roads
Unpaved roads
MUMAS
Forest reserves
Nature reserves
Private land
Land lease
Lease hold
Stateland
Stateland (Expired concession)
Concession
Community forest (HKV)
ICL for submerged wood
Incidental cutting license
Exploration license
N
W
E
S
1:2.750.000
Datasources: Narena (CELOS), Ministry of Physical Planning, Land- and Forest Management (ROGB), The Foundation for Forest Management and Production Control (SBB)

Annex 8. Summary of the results of J. Cedergren with respect to institutional capacities

(Source: Jonas Cedergren. Measurement and Reporting of Forest Carbon in Suriname: Preparing for REDD Implementation. 2009.UN-REDD PROGRAMME)

Paragraph 1.6 Recommendations and Institutional Capacities for MRV

- A REDD-reference level must thus take assumptions on future development into account. A forest valuation study is therefore justified. Such a study would have take activities other than forestry into account when valuing the forest resource.
- There is no land use plan for Suriname. This means that the legal status of forest land is undefined. Several rights may apply to the same piece of land. This must be resolved if a REDD mechanism is to be launched.
- Involvement of indigenous people and maroons in REDD must be carefully negotiated with those concerned.
- Capacity building will be particularly critical for Suriname.
- Field data with national coverage are needed. What is important is that a solid knowledge based on data collected on the ground is obtained for all parts of the country. Remote sensing is of limited value on areas barely inventoried in the past.
- Forest types relevant to carbon measurement need to be defined and studied. It is equally important that ways to monitor changes in these forest types are developed.
- At present there is no definitive data on rate of deforestation and degradation. Deforestation and degradation are further difficult to distinguish from each other. A calculated gross value has been used in the present study. This is an issue that need to be addressed.
- A special agency with fairly far-reaching authority, and well defined responsibilities, to work with REDD needs to be established. Such an agency should consist of staff from all agencies concerned by REDD.
- A council of representatives from the main groups of stakeholders to advice the “REDD Agency” would be helpful as well as a steering committee made up of representatives for agencies involved. Steering committee and stakeholder councils are important in handling and modifying expectations from parties concerned, and in making sure that all concerned are given opportunity to voice concerns, even after the launch of a REDD mechanism. It is important that the party paying the REDD revenues is made part of steering committee and stakeholder council, to make sure that the product paid for is obtained and to have a clear understanding of problems and obstacles.
- It is important that both parties in a negotiation on REDD funds have discussed scenarios thoroughly, and based on that arrived at realistic expectations. Disappointments with results can be avoided that way.
- A separate study of present efficiency in implementation of forest management standards, including recommendations on how to improve implementation and on how to ascertain continuous improvement is needed when setting reference levels.

- Mining will be an important issue. The Mining Service will play an important role in a REDD mechanism. Approaches and methods to control mining need to be developed. Regulations need to be enforced. The Mining Commission has an obvious part to play in the work to make small scale mining an environmentally responsible activity.

Paragraph 9.2 Institutional and Legal Aspects

- Agencies working with remote sensing and GIS will need to co-operate closer. This includes e.g. forestry, land surveying, agricultural agencies and mining.
- SBB has capacity to do remote sensing to update the status of granted licences and applications including spatial information and to process incoming field data. For remote sensing and GIS work SBB has at its disposal three desktop computer and one laptop. There is a HP design jet 500 plotter and a Canon Pro 900 printer. Fifteen GPS, Garmin 60 CSX have been acquired. The software consists of four licenses for ARC GIS 9.3, Idrisi Taiga is expected. There is also Spring freeware, GPS utility and Mapsource. Staff consists of one bio engineer in forest and nature management and one M.Sc. in physical land resources, two forest guards trained in basic GIS-tasks, and one B.Sc. forestry graduate is expected to join soon. The information available consists of satellite images, mainly freely downloadable Landsat or CBERS images (mainly for visual interpretation), the freely downloadable SRTM images with a resolution of 90 m, aerial photos with national coverage shot 1950 – 1970 (not digitally available) and topographical maps based aerial photos (digitally available). Vector information consists of roads, creeks, rivers, district boundaries, villages, hydropower, lake and preliminary vegetation types. There is also forestry information available, mainly license boundaries, applications, harvesting blocks (linked to production numbers), landings sawmills, skid trails, camps, compartments and indicative forest classification maps.

Paragraph 9.3 Capacity Building

- Plans for REDD must take capacity building into account. At present it is not possible to make detailed proposals. Suffice it to say that it is not unlikely that reinforcements will be necessary as duties expand because of REDD.
- Capacity building will be particularly critical for Suriname. At present there is some 18 properly trained foresters in the country, seven of which are expatriates and two are part time employed. The situation for other area of competence has not been studied in detail in the present study, but is said to be serious (Appendix 2). A policy to address this must be taken as a matter of urgency.
- REDD will, if launched, influence training of students to work in sectors affected by REDD. Training will have to communicate an understanding of sectors other than that studied. Surveyors e.g. need a basic understanding of forestry and agriculture and vice versa.
- Work with REDD will require research competence at some positions, e.g. biomass studies and forest management
- The Mining Service must acquire expertise in environmental aspects of mining including rehabilitation. Field staff may have to be strengthened to enforce environmentally responsible mining.

- Staff to do prospecting work in areas made accessible by improved infrastructure need to be recruited and trained. The objective of his is to avoid excessive digging.

Referenties

- Summary discussion 'The Forest Dialogue meetings': Addressing the demand for good forest governance for REDD, 2008.
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