

**United Nations Development Programme
Government of SURINAME**

**ENABLING ACTIVITIES FOR THE PREPARATION OF SURINAME'S SECOND
NATIONAL COMMUNICATION TO THE UNITED NATIONS FRAMEWORK
CONVENTION ON CLIMATE CHANGE**

PROJECT DOCUMENT

PIMS #3537 CC EA SNC of Suriname

This project will enable Suriname to prepare its Second National Communication to the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). This exercise has incorporated the findings and recommendations of the 2007 National Capacity Self-Assessment and Climate Change Self-Assessment exercises, as well as recommendations from consultation workshops. Main components of the project are: (a) an inventory of the greenhouse gases for the years 1996 and 2003 utilizing the IPCC guidelines; (b) vulnerability assessments of the impacts of climate change and adaptation measures in general and, in particular for certain developments and environment sectors in Suriname not addressed in the first exercise; (c) research to improve the quality of information in some specific inventory sectors such as Energy and Land Use Change and Forests; and (d) preparation of the Second National Communication of Suriname to the Conference of the Parties.

During the implementation of the project, climate change information to general public will be improved. Crosscutting issues will be addressed to foster the effort to achieve synergy between the UNFCCC and the UN Conventions to Combat Desertification and on Biological Diversity. By the end of the exercise, additional capacity to implement the Convention will have been gained at the systemic, institutional, and individual levels.

TABLE OF CONTENTS	Page
LIST OF ACRONYMS	3
Part 1: ELABORATION OF THE NARRATIVE	5
1.1 Situation analysis	5
1.2 Strategy	7
1.3 Annual Workplan	9
1.4 Management Arrangements	14
1.5 Monitoring & Evaluation	15
1.6 Audit Clause	17
1.7 Legal context	17
Part 2: TOTAL BUDGET	18
Part 3: APPENDICES	21
APPENDIX A: SUMMARY REPORT OF THE SELF-ASSESSMENT EXERCISE	21
APPENDIX B: TECHNICAL COMPONENTS OF THE PROJECT PROPOSAL	29
APPENDIX C: TERMS OF REFERENCE	54
APPENDIX D: CC SELF-ASSESSMENT REPORT	60
APPENDIX E: LETTERS OF ENDORSEMENT	71
SIGNATURE PAGE	74

List of Acronyms

ADRON	Anne van Dijk Rice Research Centre Nickerie
ALCOA	Aluminum Company of America
AOSIS	Association of Small Islands States
ATM	Ministry of Labour, Technological Development and Environment,
BOG	Bureau of Public Health Service
C	Carbon
CARICOM	Caribbean Common Market
CCD	Convention to Combat Desertification
CCSC	Climate Change Steering Committee
CDM	Clean Development Mechanism
CELOS	Center for Agricultural Research in Suriname
CFC	Chlorofluorocarbons
CH ₄	Methane
CHM	Clearing House Mechanism
CIS	Coastal Information System
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COP	Conference of Parties
CPACC	Caribbean Planning for Adaptation to Climate Change
CSNR	Central Suriname Nature Reserve
DC	District Commissioner
ENSO	El Nino and Southern Oscillation
INC	First National Communication to the UNFCCC
GDP	Gross Domestic Product
GEF	Global Environmental Facility
Gg	Giga gram
GHG	Greenhouse Gas
GIS	Geographical Information System
GPS	Global Position System
GW/h	Gigawatt-hour
Ha	Hectare
HVGO	Heavy Vacuum Gas Oil
IMAC	Inter-Ministerial Advise Commission
IPCC	Intergovernmental Panel on Climate Change
ITCZ	Inter Tropical Convergence Zone
LBA	Large-Scale Biosphere Atmosphere
L/s/km ₂	Specific discharge
LULUCF	Land Use, Land-Use Change, and Forestry
LVV	Ministry of Agriculture, Livestock and Fisheries
MSL	Mean Sea Level
MUMA	Multi Use Management Area
MW	Mega Watt
NCAP	Netherlands Climate Assistance Programme
NCSA	National Capacity Self Assessment

NIMOS	National Institute for Environment and Development in Suriname
NGO	Non-Governmental Organization
NGO CIS	Conservation International Suriname (NGO)
N ₂ O	Nitrous Oxide
NMR	National Council for Environment
NMVOC	Non Methane Volatile Organic Compounds
NO _x	Nitrogen Oxides
OAS	Organization of American States
ODS	Ozone Depleting Substances
OW	Ministry of Public Works
PFCs	Per fluorocarbons
PLOS	the Ministry of Planning and Development Cooperation
RADCHIS	Research of Atmospheric Dynamics and chemistry in Suriname
SAB	Suriname Alcohol Company
SAP	Structural Adjustment Plan
SB	Staatsblad
SER	State of the Environment Report
SRD	Surinamese dollar
SF ₆	Sulphur hexafluoride
SLR	Sea Level Rise
SO ₄	Sulfate
Sq. km	Square kilometers
STAR	Support tropical Atmospheric Research
SURALCO	Suriname Aluminum Company
SWD	Solid waste disposal
TNA	Technology Needs Assessment
toe	Ton Oil Equivalent
UNCBD	United Nations Convention on Biodiversity
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UV	Ultra violet radiation

PART 1: ELABORATION OF THE NARRATIVE

1.1 Situation analysis

1.1.1 Introduction

Suriname, a tropical humid country of about 164,000 km², with *ca.* 492,830 inhabitants, is located on the Northeastern coast of South America, between 2°-6° N and 54°-58° W. Approximately 67% of the population lives in and around the capital Paramaribo. The remaining 33% lives in small towns in the coastal districts and in tribal communities along rivers in the interior. Population growth is approximately 1% per year. The climate in Suriname is one of a semi-humid type, with average air temperatures ranging from 26° C in January up to 31° C in October, influenced generally by the up and down movement of the Inter Tropical Convergence Zone (ITCZ).

Suriname is home to many unique ecosystems. A complex mangrove ecosystem exists in the coastal plain. This area is an important breeding, feeding, and nursery ground for fish, marine invertebrates, sea turtles, and enormous numbers of migratory birds. Forest covers about 91% or 15 million ha of the total land area of which about 2 million ha or 13% has the status of Protected Areas.

The mining industry, which includes the sub-sectors of bauxite, gold, petroleum and nonmetallic minerals, is the main source for foreign exchange earnings with large growing potentials. Agricultural and tourism sectors are also contributing to certain extend to the country's GDP and foreign exchange earnings. The Agricultural sector, including livestock, fisheries, and forestry is especially in the rural districts and contributes over 20% to nations' employment.

Suriname started with petroleum production in the coastal area in the 1980's. The crude oil production at the end of 2006 was about 14,000 barrels a day. 20% of the crude oil is being exported. Recent research indicates preliminary large reserves of oil offshore.

Hydrocarbon (about 69%) and hydropower (about 26%) are the main sources for energy production in Suriname. The remaining 5% is contributed by Biomass. Despite of the enormous potential, approximately 2,590 MW, hydropower production in Suriname has been constant at about 120 MW during the past decennia. In addition, there is a considerable potential of other types of renewable energy resources such as solar, with an average radiation of 1,635kWh/m² per year, and energy from biomass and wind.

The main source of CO₂ production is the combustion of fossil fuel (49%), followed by Land-Use Change and Forestry (31%) and Agriculture (19%). The growth of the GHG emissions has sharply decreased in 1999 due to the closure of the Aluminum Smelter, though it has been showing a growth during the last years.

1.1.2 Current status

Suriname submitted its Initial National Communication (INC) to the UNFCCC in 2005 and was mainly focused on: the inventory of greenhouse gas emissions and assessment of the vulnerability of the coastal zone, with the following content:

- Introduction on the status of the country

- Climate change objectives
- Obstacles and barriers in the process of collecting data and publication of the INC
- Inventory of the GHG emissions: vehicles, forests, wetlands, agriculture, tourism sector and waste and how to cope with the deficiencies in inventorying GHG emissions
- Vulnerability assessment of the coastal zone and the impact of the sea level

There are a number of new developments in Suriname since the submission of the INC, which , will be taken into consideration in the preparation of the Second National Communication (SNC). These are:

- Infrastructure: The planned North-South Pan-American Highway will open the hinterland and consequently new development and increased pressure on the existing natural resources.
- Bauxite explorations: Dialogue on bauxite explorations and exploitation are ongoing with regard to new exploitation permits to multinationals in the hinterland. This will negatively affect the biodiversity and the local climate of the area, including the hydrology.
- Small gold mining: On-going small gold mine activities in the hinterland require necessary attention, since unknown amounts of mercury are being used annually in this sector. Although some observations with regard to mercury pollution exist, more has to be done. Small gold mines also impacts on the hydrology and other aspects of the existing natural systems negatively.
- Hydrocarbons: Large development in the coastal area is also planned. These developments are largely related to the intentions of State Oil Company Suriname to explore oil offshore as well as onshore. These developments might affect the environment and consequently the climate in this area. In addition, adverse impacts might also result due to the spin-offs of the economical growth in the country.
- The Netherlands Climate Assistance Programme (NCAP): With regard to climate studies, Suriname has executed the second phase of the NCAP. The first phase was carried out in 1996-1999. The main areas covered in this phase include a first assessment of the vulnerability of the coastal zone and a greenhouse gas inventory. The main priority to be addressed in NCAP-phase 2 is the linkage between climate change and livelihood. Adaptation measures will be also elaborated to mitigate the adverse impacts of sea level rise and the ongoing human intervention on the coastal ecosystems located north of the districts Paramaribo and Wanica. The NCAP-2 project makes recommendations on the sectors Ecology, Geomorphology, Water resources, Agriculture, Socio-economics and Human Health regarding their possible future development, including possible expansion (growth) of the urban areas within the coastal districts Paramaribo and Wanica.
- Ratification of the Kyoto Protocol (KP): Suriname has ratified the KP in December 2006. In this respect, programs to implement the KP are under construction. Some measures are already taken to start with the institutional strengthening.
- Other developments in Suriname: Other studies relevant to the SNC refer to assessments of ongoing developments in the coast, as well as in the hinterland. Environmental assessments

reports in the hinterland regard mining of kaolin, bauxite, and gold. Assessments reports in the coast regards, preliminary studies dealing with protection of the coast from ongoing wave attack and erosion, exploration and exploitation of hydrocarbon in the coastal zone, valuation of wetlands, and other intended human interventions in the biophysical systems of the coastal zone, e.g. promotion of tourism in this area.

- Lack of knowledge: The University of Suriname has also acknowledged the need for in-depth studies. At this time, the university is conducting, in cooperation with other institutions and universities, studies regarding coastal zone management, whilst new studies are being planned and formulated. The latter regards the formulation of Master of Science curriculum in Natural Resources Management.
- Rapid assessment of the Coronie swamp: For the first time a rapid assessment is being made of the country's largest wetland, the Coronie swamp. This swamp with an area of about 2000 km² has a significant impact on the biophysical systems of the coast and the local climate, which up until now are not fully understood.
- National Action Plan (NAP): In addition, a NAP is being executed. The first draft of this plan will be made available by mid 2009. The NAP will reflect all measures resulting from climate change impacts on the country. Existing information will be evaluated and an attempt will be made to address at least some of the issues, e.g. adaptations measures, within the given possibilities of the project and the existing and possible future situation of the country.

1.2 Strategy

The goal of this project is to prepare Suriname's SNC by building on previous work carried out under the INC, the NAP, such as: the outcomes and recommendations from the Netherlands Climate Assistance Program phase 2; the NCSA, and other climate change related activities that established guidelines and methodologies for the development of the project. The priority areas and issues identified through stakeholder consultation workshops under the stocktaking and thematic assessment exercises will provide focus for the proposed activities. Synergies with other environmental programmes and ongoing activities such as the UNCBD and UNCCD action plans will be attempted. Certain outputs of other projects such as the NCSA recommendations will be utilized for the SNC exercise. It is expected that the data and information reported in the SNC will be of greater reliability and detail those used for the INC and necessary steps will be undertaken to further elaborate and improve the studies.

There will be periodic public consultation workshops during which the draft reports of the GHG Inventory and those of the Vulnerability and Mitigation Assessments will be presented for review. Stakeholders will be given opportunity to participate throughout the duration of the project. Consultants will hold technical meetings among themselves and with the Project Steering Committee in order to share information and experiences. The National Focal Points of the three major environmental Conventions are expected to participate in all these sessions, as well as other representatives of their institutions.

The technical work of the SNC will utilize the established IPCC methodologies. Suriname will also be able to apply the lessons learnt from the Netherlands Climate Assistance Program phase 2. The project “Promotion of sustainable livelihood within the coastal zone of Suriname, with emphasis on Greater Paramaribo and the immediate region”, provided data for the Greater Paramaribo region and it is expected that improved and additional national data will be incorporated into the estimates.

In response to Suriname’s needs to address mitigation and adaptation, the country will engage in key research and consultative activities all aimed at conducting a National Technology Needs Assessment (TNA). The TNA process is expected to identify technology gap and needs in its efforts to respond to mitigation and adaptation initiatives. The TNA will contribute to the development of a comprehensive national strategy for dealing with climate change by providing an integrated framework for technology transfer in support of sustainable development.

**1.3 Annual Workplan
Year 1:**

	PLANNED ACTIVITIES	TIMEFRAME				Responsible party	PLANNED BUDGET		
		Q1	Q2	Q3	Q4		source	description	Amount
<p>Output 1 National circumstances</p> <p>Baseline: Update required reflecting the changes that have transpired between the first report.</p> <p>Indicators: Report on validation information gaps</p> <p>Targets: National Circumstances reviewed and updated.</p> <p>Related CP outcome: A sustainable natural resources planning and management system is in place</p>	<p>Activity result National Circumstances reviewed and updated.</p> <ul style="list-style-type: none"> ▪ Validate the gaps of information identified under stocktaking ▪ Identify the respective sources of information ▪ Collect data and information from different sources ▪ Fill the gaps, update and add the new information 				x	ATM	UNDP	Local consultants	4,000

<p>Output 2 GHG inventory</p> <p>Baseline For the fourth GHG inventory, to be reported in the Second Communication to the UNFCCC, the latest available IPCC guidelines will be used to complete this inventory.</p> <p>Indicators The GHG inventory team in place International consultant contracted Progress report on results review existing information submitted and selected methods and tools for the inventory</p> <p>Targets Existing information reviewed Methods and tools to be used for the inventory selected</p> <p>Related CP outcome A sustainable natural resources planning and management system is in place</p>	<p>Activity result The GHG inventory team maintained and strengthened</p> <ul style="list-style-type: none"> ▪ Identify and mobilize national and international experts in targeted sectors and related areas of relevance ▪ Review the existing information on the previous GHG inventory and familiarize with guidelines ▪ IPCC Methodologies for GHG inventory estimates analyzed, selected and validated ▪ Analyze the acceptability of the available methodologies estimates ▪ Decide on methods and tools to be used for inventory ▪ Decide on the source categories to which surveys for filling data gaps will be carried out <p>Activity result: GHG inventory data collected</p> <ul style="list-style-type: none"> ▪ Review available activity data already archived ▪ Identify new activity data needed for estimates of GHG emissions for 2005 ▪ Identify possible sources of data ▪ Collect the necessary activity data from the available sources ▪ Identify gaps. 	x	x	x	x	ATM	UNDP	Local Consultants International consultants Travel Contractual services	18,000 8,000 6,000 3,000
<p>Output 3 Programmes containing measures to adapt to climate</p>	<p>Activity result: The Adaptation team established</p> <ul style="list-style-type: none"> ▪ Identify and mobilize national and international experts in targeted sectors 		x	x	x	ATM	UNDP	Internat. Consultants Local consultants Service contracts	10,000 3,000 6,000

<p>change</p> <p>Baseline</p> <p>Limited technical expertise in most sectors agencies to respond to long-term issues such as climate change.</p> <p>Indicators</p> <p>The Vulnerability and Adaptation team in place</p> <p>Report on training activities for data collection and analysis</p> <p>Targets</p> <p>Mobilize experts to participate Technical team</p> <p>Related CP outcome</p> <p>A sustainable natural resources planning and management system is in place</p>	<p>and related areas of relevance</p> <ul style="list-style-type: none"> ▪ Training activities undertaken <p>Activity result Specific approaches, tools, and methods agreed. Pertinent data and information assembled, analyzed, and synthesized</p> <ul style="list-style-type: none"> ▪ Decide on the range of the assessment: scope, approaches, tools and methods ▪ Identify and collect the type and scope of data and information needed ▪ Develop the necessary developmental scenario's and appropriate models and tools supporting this determination ▪ Develop environmental and socio-economic baselines for use in assessments. <p>Activity result: Vulnerability and risk assessment of priority sectors</p> <ul style="list-style-type: none"> ▪ Refine and utilize scenario modeling to determine magnitude of vulnerability. ▪ Assess vulnerability of climate and sectors in priority areas/sectors ▪ Organize a national workshop to get feed back for the vulnerability ▪ Public awareness activities implemented <p>Activity result: Adaptation measures and action plan identified.</p> <ul style="list-style-type: none"> ▪ Develop adaptation response measures 											Travel			6,000		
--	---	--	--	--	--	--	--	--	--	--	--	--------	--	--	-------	--	--

	<ul style="list-style-type: none"> Public awareness measures initiated 								
<p>Output 4 Programme containing measures to mitigate CC</p> <p>Baseline</p> <p>No mitigation team exists</p> <p>Necessary data and information for scenario development not available</p> <p>Indicators</p> <p>A Mitigation Team in place</p> <p>Technical team trained in Data collection and analysis for GHG Inventory preparation, vulnerability and adaptation and mitigation assessment</p> <p>Targets</p> <p>Mitigation Team in place and trained</p> <p>Technical team trained in Data collection and analysis for GHG Inventory preparation, vulnerability and adaptation and mitigation assessment</p> <p>Related CP outcome</p> <p>A sustainable natural resources planning and management</p>	<p>Activity result:</p> <p>The Mitigation Team established</p> <p>Activity result:</p> <p>Necessary data and information for scenario development collected, analyzed, and taken into consideration for scenario development.</p> <ul style="list-style-type: none"> Consider estimates of GHG inventory for the base year 2015 Identify methodological tools and approaches. Collect all relevant macro-economic data and set assumptions Identify GHG abatement measures presently being undertaken Review the status of the relevant policy and legal framework Training activities undertaken. <p>Activity result:</p> <p>Constraint, gaps and related needs (financial, technical and capacity) identified and reported</p> <ul style="list-style-type: none"> Review the status of the constraints and gaps from previous studies 	x	x	x	ATM	UNDP	International consultants Local consultants travel	4,000 8,000 7,000	

system is in place									
--------------------	--	--	--	--	--	--	--	--	--

<p>Output 5</p> <p>Other relevant information; Constraints, gaps, and related financial, technical and capacity needs</p> <p>Baseline</p> <p>Climate change is not integrated into socio-economic policies</p> <p>No specific trained expertise on SNC available</p> <p>No updated review on constraints and gaps available</p> <p>Indicators</p> <p>Team contracted to prepare report</p> <p>Report on Review of the status of the constraints and gaps from previous studies submitted</p> <p>Consultant contracted to collect information on steps to be taken to integrate climate change into socio-economic policies</p> <p>Targets</p> <p>Review of the status of the constraints and gaps from previous studies</p> <p>Information on steps to be taken to integrate climate change into socio-economic policies, is provided.</p>	<p>Activity result</p> <p>The Vulnerability and Adaptation team established</p> <ul style="list-style-type: none"> ▪ Identify and mobilize national and international experts in targeted sectors and related areas of relevance ▪ Training activities undertaken <p>Activity result: Constraint, gaps and related needs (financial, technical and capacity) identified and reported</p> <ul style="list-style-type: none"> ▪ Review the status of the constraints and gaps from previous studies. <p>Activity result: The information compiled, analyzed, and finalized.</p> <ul style="list-style-type: none"> ▪ Collect, synthesize and provide the overall information relevant to the Article 6 activities ▪ Collect, synthesize and provide the information on steps taken to integrate climate change into socio-economic policies. 	x	x	x	ATM	UNDP	Local consultants Service Contracts-Service Contracts-Individuals Internat. consultants	8,000 1,000 1,500 2,000
---	---	---	---	---	-----	------	--	----------------------------------

<p>Output 7- Project Management Baseline</p> <p>The capacity of the Government and NIMOS are not adequately staffed to prepare the SNC report</p> <p>No technical team in place to advise with regard to the reporting requirements</p> <p>Indicators</p> <p>Project office staff contracted Technical teams established Inception workshop report .</p> <p>Targets</p> <p>Project office fully operational Technical teams established Initiation workshop implemented</p> <p>Related CP outcome</p> <p>A sustainable natural resources planning and management system is in place</p>	<ul style="list-style-type: none"> ▪ Contract the project office staff ▪ Establish technical teams ▪ Organize a project initiation workshop ▪ Maintain and upgrade the electronic network among experts /institutions 	x	x	x	x	ATM	UNDP	<p>Service Contracts- Individuals</p> <p>Equipment and Furniture</p> <p>Communic. & Audio Visual Equip</p> <p>Supplies</p> <p>Operational costs</p> <p>Misc.</p> <p>Professional Services</p> <p>Audit Fees</p>	<p>25,000</p> <p>3,000</p> <p>5,000</p> <p>4,000</p> <p>1,500</p> <p>1,500</p> <p>1,800</p> <p>2,200</p>
---	---	---	---	---	---	-----	------	---	--

1.4 Management arrangements

The project will be executed through NEX modality with ATM acting as the Designated Institution with execution occurring through the Environment Division of this Ministry. The SNC will be implemented by the Ministry of Planning and Development Cooperation (PLOS) and ATM. This is intended to facilitate integration of climate change and SNC outputs within an institutional setting with a record of, and capacity for, effective implementation of a project of

this nature. This will also facilitate integration of SNC concerns with other national development priorities. The CCSC, chaired by the Permanent Secretary of ATM, will participate in the execution as the Project Steering Committee (PSC). Capacity of this committee will be enhanced by the participation of the University of Suriname who will provide technical support during the implementation of the project, and where required, local consultants will be asked to support the committee with additional technical capacity.

Institutional Framework for Project Implementation

The Ministry of Labour, Technological Development and Environment (ATM) is responsible for the development of an overall environmental policy and the coordination and monitoring of all activities regarding environmental policy. The Environment Division of the Ministry of ATM will execute the project. This will place the project within an institutional framework, aimed at providing greater technical capacity in implementation of the SNC as well as allowing enhanced coordination at programmatic levels between and within ongoing GEF projects being implemented by the Environment Division. The project will significantly strengthen the Environment Division's capability to deal with the issues of climate change and allow for the Environment Division and other agencies to increasingly incorporate climate change concerns into national development planning.

A National Project Manager (NPM) within the Environment Division will coordinate the day-to-day project execution activities and will be responsible for meeting the objectives of the project. Further, various technical agencies will be charged with responsibility for coordinating preparation of specific technical chapters of the SNC.

The Climate Change Steering Committee will provide technical oversight and guidance to the project. The committee comprises of representatives agencies that have stakeholder interests across a range of the subject areas being addressed in the SNC process particularly

- The Environment Division of the Ministry of ATM.
- NIMOS
- The Meteorological Department of the Ministry of Public Works ,
- The Ministry of Agriculture
- The Ministry of Trade and Industry
- The Geological Mining Institute
- University of Suriname
- Non-governmental representation: Private sector
- Non-governmental representation : Civil society

UNDP and the Embassy of the Netherlands will participate as observers. Other key agencies are likely to include the National Office of Disaster Services, the Ministry of Health, the Ministry of Finance, the Statistics Division and these agencies will likely contribute to the work of the technical teams as well as providing technical guidance and input in certain areas.

In addition attention will be paid to the establishment of three technical teams drawing on expertise from other agencies, involving respectively a GHG inventory team, a GHG abatement team, and a V&A team to support technical tasks and activities under this project. Short-term consultants will be hired to implement specific activities including training and capacity building. Emphasis should, as far as possible, be on utilizing expertise developed from other fields and activities (CPACC, MACC, Bio-safety etc) and on available regional expertise.

1.5 Monitoring and evaluation

A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include, e.g.: (i) tentative time frames for Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms), (ii) project related Monitoring and Evaluation activities, and projected timeframes for deliverables.

Day to Day Monitoring of Implementation Process will be the environmental department of ATM and based on the project's Annual Work Plan and its indicators. The ATM will inform the UNDP Country Office of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

Project Monitoring Reporting

The environmental department of ATM will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

(a) Inception Report (IR)

A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year Work Plan divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame. Furthermore, the IR will include the general outline for the methods and tools to be used for achieving the intended goals.

The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up

activities and an update of any changed external conditions that may effect project implementation.

When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

(b) *Quarterly Progress Reports*

Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team, according to a given and agreed format.

(c) *Technical Reports*

Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

1.6 Audit Clause

The Government will provide the Resident Representative with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

1.7 Legal context

This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the Government of Suriname and the UNDP.

The host country-implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

UNDP acts in this Project as Implementing Agency of the GEF, and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended mutatis mutandis to GEF.

The UNDP Resident Representative is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by

GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- e) Inclusion of additional annexes and attachments only as set out here in this Project Document *Intellectual property rights*: All data, study results, information, reports, etc, generated with UNDP/GEF project funds will be the property of GoS and UNDP. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear alongside the UNDP logo on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF.

PART 2. SURINAME SNC BUDGET

Award ID:	00044029							
Award Title:	PIMS # 3537 CC EA SNC of Suriname							
Project ID	00051616							
Project Title:	PIMS # 3537 CC EA Second National Communication of Suriname							
Executing Agency:	Ministry of Planning and Development Cooperation (ATM)							
OUTPUTS (and corresponding indicators)	RESP.	PLANNED BUDGET						
	PARTY	Source of funds	Budget Code	Budget Description	Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Total Budget (USD)
1- National Circumstances	ATM	62000	71300	Local Consultants	4,000	3,000	3,000	10,000
Sub-total					4,000	3,000	3,000	10,000
2- National Greenhouse Gas Inventories	ATM	62000	71300	Local Consultants	18,000	18,000	18,000	54,000
		62000	71200	International consultants	8,000	8,000	3,000	19,000
		62000	71600	Travel	6,000	6,000	6,000	18,000
		62000	72100	Contractual services	3,000	3,000	3,000	9,000
Sub-total					35,000	35,000	30,000	100,000
3. Programmes containing measures to adapt to CC	ATM	62000	71200	International consultants	10,000	10,000	10,000	30,000
		62000	71300	Local consultants	3,000	3,000	3,000	9,000
		62000	72100	Contractual services	6,000	6,000	6,000	18,000
		62000	71600	travel	6,000	6,000	6,000	18,000
Sub-total					25,000	25,000	25,000	75,000

OUTPUTS (and corresponding indicators)	RESP. PARTY	PLANNED BUDGET						
		Source of funds	Budget Code	Budget Description	Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Total Budget (USD)
4- Programmes containing measures to mitigate CC	ATM	62000	71200	International consultants	4,000	4,000	4,000	12,000
		62000	71300	Local consultants	4,000	4,000	4,000	12,000
		62000	71300	Local Consultants	4,000	4,000	4,000	12,000
		62000	71600	travel	7,000	5,000	2,000	14,000
Sub-total					19,000	17,000	14,000	50,000
5-Other relevant information	ATM	62000	71300	Local consultants	5,000	3,000	3,000	11,000
		62000	72100	Service Contracts-	1,000	1,000	1,000	3,000
		62000	74210	Printing and Publications	-	2,000	3,000	5,000
Sub-total					6,000	6,000	7,000	19,000
6- Constraints & Gaps; Related Financial, Technical, & Capacity Needs	ATM	62000	71300	Service Contracts- Individuals	1,500	1,500	1,500	4,500
		62000	71200	International consultants	2,000	2,000	1,500	5,500
Sub-total					3,500	3,500	3,000	10,000
7- Technical Assistance	ATM	62000	71300	Local consultants	3,000	3,000	3,000	9,000
Sub-total					3,000	3,000	3,000	9,000
8- Compilation, including Executive summary, Production & Dissemination	ATM	62000	71300	Local consultants s	-	3,000	4,000	7,000
			74210	Printing and Publications	-	-	8,000	8,000
Sub-total					-	3,000	12,000	15,000

OUTPUTS (and corresponding indicators) indicators)	RESP. PARTY	PLANNED BUDGET						
		Source Of funds	Budget Code	Budget Description	Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Total Budget (USD)
9- Project Management	ATM	62000	71405	Service Contracts- Individuals	25,000	25,000	25,000	75,000
		62000	72200	Equipment and Furniture	3,000	1,500	1,500	6,000
		62000	72400	Communic. & Audio Visual Equip	5,000			5,000
		62000	72500	Supplies	4,000	3,000	3,000	10,000
		62000	74000	Operational costs	1,500	1,500	1,500	4,500
		62000	74500	Misc.	1,500	1,500	1,500	4,500
<i>Sub-total</i>					40,000	32,500	32,500	105,000
	ATM	62000	74100	Professional Services	1,800	1,800	1,800	5,400
		62000	74110	Audit Fees	2,200	2,200	2,200	6,600
<i>Sub-total</i>		ATM			4,000	4,000	4,000	12,000
<i>Grand Total</i>		62000			139,500	132,000	133,500	405,000

APPENDICES

APPENDIX A: SUMMARY REPORT OF THE SELF-ASSESSMENT EXERCISE

A.1 Description of the process and approach adopted for the stocktaking exercise

Suriname has completed a self-assessment of its climate change enabling activities. The self-assessment was conducted in accordance with GEF Operational Procedures for the Expedited Financing of National Communications from Non-Annex I Parties. The self-assessment consisted of two components involving:

1. A stocktaking of climate change enabling activities conducted to date in a few coastal communities, and
2. Stakeholder consultations, to promote stakeholder ownership of SNC activities and to advance institutional arrangements for project implementation.

A self-assessment exercise with policymakers was performed. It included the ministers and parliamentarians that would widen the awareness on this issue. The main objective of the exercise was to undertake a consultative process for review of previous project activities, and to conduct a needs assessment with a view to identifying and validating priorities for formulation and implementation of the SNC project proposal. This approach ensures that the SNC builds on previous activities, studies, experiences, and institutional arrangements.

The self-assessment was undertaken by a regional consultant utilizing (i) a desk review of relevant documents; (ii) exchanges of information and data with stakeholders; (iii) interviews with stakeholders; (iv) and a consultative meeting.

The stocktaking exercise brought together approximately 100 stakeholders from different ministries, public institutions, and NGOs from various parts of the country.

Further information regarding the self-assessment can be found Appendix C.

Table 1. Below indicates potential primary project stakeholder agencies and their role in the SNC process.

Table 1: SNC Project Primary Stakeholders

Name of institutions / stakeholders consulted	Stakeholder interests, official position or mandate	Reasons for inclusion	Role in the self-assessment process (e.g. consultation, preparation of draft report, data provider)
NIMOS, Ministry of Labour, Technological Development and Environment (ATM).	Management of the project. NIMOS - Provider of data Ministry ATM- Responsible for coordination of environmental issues.	Central stakeholder and project manager.	Coordination and management of project activities. Data provider.
Ministry of Planning.	Responsible for national planning.	Central stakeholder and project manager.	Coordination and management of project activities. Data provider.
Ministry of Agriculture	Promotes agricultural development.	Agriculture sector and issues critical to GHG, V&A and mitigation issues.	Data provider, technical advisory, and awareness roles.
Meteorological service	Responsible for collection, analysis, and distribution of weather and climate information.	Meteorological information central to all aspects of climate change.	Data provider, technical advisory, and awareness roles.
Energy Company (EBS)	Sole public distributor of electricity.	Vital to GHG, Mitigation, and V&A components.	Data provider and technical roles.
Suriname Water Company (SWM)	Public supplier of potable water.	Water management issues will be critical impact of climate change.	Data provider and technical roles.
Ministry of Health.	Responsible for management and delivery of health services.	Health policy and management agency.	Data provider and public awareness roles. Participation in technical roles.
Ministry of Public works - Solid Waste Management Corporation (to be established).	Government agency responsible for collection and management of solid wastes.	Important environmental management agency in health related matters.	Data provider and public awareness roles.
National Coordination Center for Emergency (NCCR)	Responsible for disaster response coordination and management	Information source for climate risk and vulnerability. Implementation role for adaptation.	Data provider and public awareness roles. Participation in project technical advisory roles.
General Bureau of statistics (ABS)	Provider of statistical data. Archiving center.	Important in providing data across a range of INC chapters.	Data provider.
STAATSOLIE	Crude oil producer	Growing potential in fossil fuel products	Data provider
Oil import companies (Sol, Texaco etc.)	Importer of aviation fuels and other petroleum products.	Important distributor of petroleum products.	Data provider.

A.2 Main Outcomes of INC Process Including Priorities Identified

Suriname submitted its INC to the UNFCCC Secretariat in 2005 and followed the guidelines laid down in UNFCCC COP decision 10/CP.2. Coordination for preparation of the INC was provided by NIMOS for ATM. A number of local consultants were utilized in preparation of Suriname's INC.

The National Circumstances chapter of the INC provides an overview of the country with emphasis on those aspects of the national circumstances most related to climate and climate change. A local technical expert prepared the chapter. For the Greenhouse Gas Inventory the year chosen was 2003. Information provided within the Inventory utilized the 1996 IPCC Revised Guidelines for Greenhouse Gas Inventories (Volumes 1, 2 and 3) with accompanying Microsoft Excel software.

The Inventory was done on a sectoral basis for the Energy, Industrial Processes, Agriculture, Forestry, Land-Use Change, and Wastes sectors. In accordance with the IPCC Revised Guidelines, emissions from international aviation and from biomass burning were treated as memo items and not included in the national Inventory totals.

A number of methodological and technical problems were encountered in completing the national GHG inventory. These problems were related to the lack of data in many areas of the Inventory particularly in the agriculture, land use, and forestry sectors. The use of the IPCC default values, in all sectors, is generally not reflective of national circumstances (e.g. variations in soils and topography). The lack of experts in the country and/or their limited number presented challenges for completing the inventory.

In relation to analysis of issues relating to climate change vulnerability and adaptation, Suriname assessed the country's vulnerability to limited number of projections of climate change in certain sectors and areas. Methodologies used were from IPCC and UNEP although data and time constraints limited the extent of analysis possible and the results are to be seen as preliminary.

The INC provides an overview of projected impacts of climate change in Suriname for forestry and terrestrial resources, agriculture, coastal ecosystems, water resources, human settlements, tourism, and human health. Analysis is based on expert judgment including assessment of technical literature and information from IPCC and other sources.

Chapter 4 of the INC "Institutional Framework" outlines the various responsibilities and portfolios of government and non-government organizations involved in sustainable development activities, the existing environmental legislative provisions, and the various United Nations and other environmental conventions, to which the country is party. This chapter was prepared by government in-house personnel and is consistent with information requirements under decision 10/CP.2.

Chapter 5 of the INC "National Response Measures" provides an overview of national sustainable development strategies that include both climate change mitigation and adaptation measures. In relation to mitigation, the INC focuses on the main greenhouse gas sources as

identified in the GHG Inventory, these being the residential, transport and electricity generation sectors. Response actions identified include actions for achieving improved efficiencies in energy use, reductions in emissions in the road transport sector, and the use of renewable energy technologies. In relation to measures for adaptation to climate change, the INC identifies a number of preliminary “win-win” proposals targeted at priority concerns such as water resources, tourism, agriculture, and health.

In addition to the INC, Suriname has also participated in various activities intended to strengthen national capacity for climate change through UNDP/GEF Phase 2 activities. This has involved an assessment of climate change technology needs, and an assessment of requirements for the systematic research and observation of climate in Suriname. Both of these activities provided stakeholders in various government and NGO agencies with an opportunity to enhance awareness of climate change issues in the period since preparation of the INC.

A.3 Lessons learned/recommendations for the preparation of the SNC

The self-assessment identifies a number of recommendations for strengthening capacity for climate change in Suriname particularly in terms of measures for improving preparation of the SNC. This includes recommendations for:

1. Strengthening climate related data collection;
2. Sectoral based training in vulnerability and adaptation for technical experts including short-term overseas technical training for representatives of lead agencies, exchange of experts in similar fields;
3. Identification of regional and international technical support and assistance for vulnerability and adaptation;
4. Public outreach and awareness of climate related concerns.
5. Establishment of a multi-agency technical committee charged with overseeing technical outputs of the project. This will probably be based on existing multi-agency, multi-sector coordinating structures;
6. Ensuring adequate representation of non-governmental and government Administration representatives in project implementation activities.
7. Reporting on synergies with other sustainable development programmes and initiatives;
8. Strengthening the role of the meteorological forecasting agency including climate change related issues;
9. Strengthening the observation network to obtain data from the physical processes in the natural systems, including the training regarding its comprehensive use.
10. Encouraging to establish a data base and website regarding issues dealing with climate change
11. Early identification of the local implementing agency for the GHG Inventory;

12. Identification of mitigation options measures for Suriname within the SNC in view of increasing concerns for energy costs and security of supply;
13. Early identification of expert technical support for the Inventory;
14. Early initiation of data collection for the Inventory;
15. Provision of short-term overseas training of national counterpart technical experts; and
16. Involvement of a wide range of stakeholders in GHG Inventory training/preparation workshops.

A.4 Synergies with Relevant Initiatives

Suriname is involved in implementation of a number of multilateral environmental conventions. These include the UNCBD, the UNCCD, the Cartagena Protocol on Biosafety, the Stockholm Convention regarding Persistent Organic Pollutants, and the Montreal Protocol for protection of the Ozone Layer. The country is involved in implementation of its GEF NCSA and this is expected to result in identification of opportunities for enhanced synergy in implementation of programmes related to these conventions.

The implementation of the NCSA has among other things served to increase people's awareness of climate change and the links to other ongoing sectoral programmes. Limited capacity within Suriname for implementation of these conventions is a major constraint and points to the significance of integrating and coordinating action among the conventions where possible, so as to maximize use of limited national technical capability as well as drawing on regional sources for technical assistance and cooperation (e.g. exchange of information, joint training).

It is also important that the SNC be closely linked to other ongoing development initiatives such as those for tourism development, agricultural diversification, and environmental health. Training and sensitization activities for technical personnel, and more general public awareness measures, are intended to establish links with development planning and project implementation activities in private and public sectors.

Since climate change deals with almost all activities and therefore functions as an umbrella for all ongoing, planned and future activities, it is important consider its value in a way that is reflected in the policy documents of the governmental departments and institutions. The SNC should facilitate this and enhance this process.

A.5 Priorities for SNC Project Implementation

The INC has highlighted a number of core requirements for enhancing possibilities for successful implementation of the SNC. These are:

- Training of technical personnel;
- Data collection leading to select studies; and
- Public awareness

Other requirements include appropriate laws, institutions, awareness programmes, and other arrangements such as training and data mapping. These elements will contribute to building sustainability of national capacity for responding to climate change. The aim of these measures should be for Suriname to adequately report and prepare its SNC and to support mainstreaming of climate change concerns and considerations into national project planning and implementation in the country.

APPENDIX B: TECHNICAL COMPONENTS OF THE PROJECT PROPOSAL

Background/Context

Background information: The INC has made several recommendations, which also have been emphasized in the NCAP phase 1 program. These recommendations are basic inputs for the National Action Plan in construction. The NCAP phase 2 will also result in recommendations to mitigate the impacts of climate change, e.g. sea level rise. Other studies, dealing with vulnerability of the coast and possible development of the different sectors also concluded many valuable recommendations for being incorporated by the policy makers in their policy documents. However, the same documents have stated limited implementation of these recommendations policy documents. Integration of policy and measures recommended is required, which is mainstreaming climate change into development planning and ongoing sectoral decision-making. This integration will ensure the long-term sustainability of development activities in the vulnerable regions. The integration should involve not only a top-down integration of ‘traditional’ technology-based adaptation measures but measures that address the underlying factors of vulnerability. Realization of these recommendations requires strong technical and institutional capacity in the country, which repeatedly has been reported to be lacking.

1.1 Project Objectives

Project Development Objective:

The project will strengthen technical and institutional capacity to assist Suriname to mainstream climate change concerns into sectoral and national development priorities.

Project Immediate Objective:

The project will enable Suriname to prepare and submit its second national communication to the UNFCCC and meet its Convention obligations.

Project strategy:

The SNC will seek to feed into the policy decision processes of relevant areas, including linkages with national development priorities through enhancing awareness of key stakeholders in public and private sectors to climate change issues and concerns, providing training for persons involved in sector planning, and facilitating inter-agency collaboration and cooperation in implementation of SNC activities. All other relevant organizations, NGO’s, committee’s and governmental departments, including ministries dealing with climate change should be taken into consideration.

The SNC will be implemented by the Ministry of Labour, Technological Development and Environment. This is intended to facilitate integration of climate change and SNC outputs within an institutional setting with a record of, and capacity for, effective implementation of a project of this nature. This will also facilitate integration of SNC concerns with other national development priorities.

1.2 Project Activities

Preparation of the SNC is intended to focus on building capacity to perform the SNC and subsequent national communications while enabling linkage between these activities and those related to other development concerns such as economic growth, environmental protection, and public health.

The studies conducted under the INC indicate that a number of adverse impacts can be expected to result from projected changes in future climate. This requires that efforts towards climate change adaptation be initiated. On the mitigation side, it is important that Suriname be in a position to benefit from new technologies, demonstrate its commitment under the UNFCCC to reduce GHG emissions, and be able to take advantage of any possibilities for assistance under Kyoto Protocol instruments¹.

A major constraint facing action on climate change in the country is the limited technical expertise that exists in most sector agencies to respond to long-term issues such as climate change. In this regards training of personnel in key areas such as GHG Inventory preparation, vulnerability and adaptation assessment, and mitigation assessment will be critical elements of capacity building.

Although some long climatological series exist, the availability of meteorological and climatological data is by far not sufficient. An important requirement therefore is to expand the climate information of the country. This information will be helpful towards a range of existing purposes and be important for identifying vulnerability and adaptation options, as well as providing crucial data for mitigation of GHGs. In many instances meteorological monitoring equipment and other equipment may required.

Stakeholder consultations highlighted the importance of public awareness as a requirement for enhancing Suriname ability to respond to climate change issues and concerns. Public awareness is required for enabling adaptation measures at the individual, community and enterprise levels, and also in guiding public policy. Efforts for strengthening awareness should accompany virtually all of the technical activities of the SNC process. Target groups will need to be identified, and material developed in this regards, aimed at providing information on results of climate change activities in Suriname and at regional and global levels.

Noteworthy are the efforts taken in implementing Capacity Development for Clean Develop Mechanism (CD4CDM-project) in Suriname. The first results of these actions are identification, evaluation and approving of CDM project.

The following priority areas of capacity building are suggested for emphasis during the SNC process:

¹ The Kyoto Protocol establishes a Clean Development Mechanism (CDM) to assist developing countries (non-annex 1 Parties to the UNFCCC) to reduce emissions through financing for GHG mitigation measures involving GHG emissions trading arrangements with partners from developed countries (annex 1 Parties to the UNFCCC).

Training of technical personnel;
Data collection and analysis leading to improved relevant data systems ;
Public awareness; and
Institutional strengthening

1.3 Detailed Project Activities

1.3.1 National Circumstances

The National Circumstances of Suriname presented in the INC will be updated. All aspects of the national circumstances will be addressed. It is expected that the geographical and physical condition will require minor revisions, while the other aspects of this section of the report will require some update to reflect the changes that have transpired between the first and second reporting periods.

Output 1.3.1 National Circumstances reviewed and updated.

Activities

- Validate the gaps of information identified under stocktaking exercise and the recently completed exercise under the National Capacity Self-Assessment project.
- Identify the respective sources of information
- Collect data and verify information
- Fill the gaps, and add the new information
- Ensure appropriate linkage of the new information and analysis of the national circumstances in relation to the main component of the SNC
- Draft the National Circumstances section.

1.3.2 National Greenhouse Gases Inventory

The inventory of Greenhouse Gases and Sinks in Suriname, as reported in the First Communication report was the third inventory. The first inventory was carried out in 1997 (base year 1995). The second inventory was done in 2001 with 1998 as base year, but has not been published. The third inventory has been published in the INC. All inventories have been carried out according to the IPCC guidelines and are based largely on incomplete data. For the fourth GHG inventory, to be reported in the Second Communication to the UNFCCC, the latest available IPCC guidelines will be used to complete this inventory.

Consultants working in this phase of the project will be expected to review all activities that are underway or have been completed in the region in order to determine whether the technology can be applied to the Suriname situation. The opportunity to share experiences and lessons will be exploited.

Output 1.3.2: Fourth Greenhouse Gas inventory.

Activities:

- Establish a team comprising experienced national and international consultants will be assembled to conduct the fourth national greenhouse gases inventory of emissions and sinks.

- Revision of existing data and information on the third GHG inventory.
- Carry out a key category analysis to identify the main sources of emissions so that efforts for improvement are targeted.
- Identification of gaps and collection of additional data to improve quality of the GHG inventory.
- Decide on the source categories to which surveys for filling data gaps will be carried out.
- Use of IPCC tools and standardized IPCC protocols by inventory consultants.
- Presentation and validation of findings through organized national workshops
- Finalization of the GHG inventory report and preparation of chapter for the SNC.
- Decide for sector(s) eligible activities for KP and formulate a strategy for possible consideration of this sector under the KP scheme.
- On the basis of the above validation, develop a national inventory management system to facilitate the updating of GHG inventories in the future and sustainability of the inventory process.
- Appropriate training and equipping of the national established GHG team

1.3.3 Programmes for Vulnerability Assessments and Adaptation Measures for climate change

Vulnerability assessments of natural and man-made systems to climate change and sea level rise. The INC has highlighted only vulnerability assessments of the coastal zone. The SNC, taking into consideration of the latest developments over the entire country, will include also vulnerability assessments of the hinterland of Suriname. These include the flood risks areas, the highly polluted areas due to small gold miners' activities and its impacts combined with impacts of climate change (flooding and drought), health problems, including malaria and other waterborne diseases.

The VA will be performed at sectoral level. The Consultants will produce individual reports that will be attached as annexes to the SNC. The Project Manager, in collaboration with the National Focal Point, will integrate these reports to produce a synopsis, submitted as a section of the Second National Communication

Output 1.3.3: Vulnerability and Adaptation of Coastal erosion and land loss including Impact of the sea level rise and the Vulnerability of Coastal Zone

This consultancy will determine the vulnerability of coastal water resources to changes in the hydrological cycle and rising sea levels, including signs of salt water intrusion and other form of water degradation. At least two sites will be selected representing a coastal aquifer and an inland catchment area. To the extent possible, analyses will be undertaken of climatological records to determine any changes that may have been observed. Models outputs will be used to select the most likely future climate scenarios. These scenarios will be used to objectively determine the potential future surface and subsurface water characteristics.

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of the coastal zone relative to changes of coastal water resources and hydrological cycle, and provide them with the Terms of Reference.
- Feedback with relevant stakeholders, including the consultants

- Draft presentation of adaptation measures
- Draft follow-up plan of action with recommendations.
- Document and distribute the report among the relevant stakeholders.

Output 1.3.4: Vulnerability and Adaptation of the freshwater zone ecosystem

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of freshwater ecosystems, including the brackish ecosystems, and provide them with the Terms of Reference
- Feedback with relevant stakeholders, including the consultants
- Draft presentation of adaptation measures
- Draft follow-up plan of action with recommendations.
- Document and distribute the report among the relevant stakeholders.

Output 1.3.5 Vulnerability of the Agriculture sector

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of the coastal zone, and provide them with the Terms of Reference.
- Feedback with relevant stakeholders, including the consultants
- Draft presentation of adaptation measures
- Draft follow-up plan of action with recommendations.
- Document and distribute the report among the relevant stakeholders.

Output 1.3.6 Vulnerability of the Socio-economic situation including the Gender Perspective,

Proposed adaptation measures

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of the socio-economic situation with particular emphasis on the livelihood in the remote areas and on gender and in relation to the ongoing case study on gender and climate change risk, according to an agreed Terms of Reference
- Draft of the most likely development scenarios
- Feedback with relevant stakeholders, including the consultants
- Draft presentation of adaptation measures
- Match activities with the MDG's
- Draft follow-up plan of action with recommendations.
- Document and distribute the report among the relevant stakeholders.

Output 1.3.7 Vulnerability to Human Health

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of the country, in particular the remote areas and the coastal zone, and provide them with the Terms of Reference.
- Draft presentation of adaptation measures
- Match activities with the MDG's
- Draft follow-up plan of action with recommendations.

- Document and distribute the report among the relevant stakeholders.

Output 1.3.8 Vulnerability of the water resources sector

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of the water resources in the country, and provide them with the Terms of Reference.
- Purchase and apply climate models for the different regions of the country
- Feedback with relevant stakeholders, including the consultants
- Draft presentation of adaptation measures
- Draft follow-up plan of action with recommendations.
- Document and distribute the report among the relevant stakeholders.

Activities:

- Identify the methodological approach and develop a detailed workplan to determine the vulnerability of water resources of the country, and provide them with the Terms of Reference.
- Feedback with relevant stakeholders, including sources outside the country
- Match the validity of the results
- Draft presentation of adaptation measures
- Draft follow-up plan of action with recommendations.
- Document and distribute the report among the relevant stakeholders.

1.3.4 Other information considered relevant to the achievement of the objective of the Convention

Technology transfer. Special attention will be given to the issue of technology transfer. There is a need for promotion and cooperation in the application and transfer of technology to control, reduce or prevent emissions through investments and research projects in renewable energy from sources such as biomass, hydro, tidal, thermal, solar and wind.

This is first of all valid for the energy sector, in particular with regard to the exploitation of the renewable resources, followed by the upgrading of the existing energy infrastructure, including the sources of energy generation. This is also true for the management and utilization of the natural resources; in particular within the mining sector, including hydrocarbon, gold and bauxite, and the forestry sector. Sound technologies are also required to establish appropriate infrastructure for new sectors and even for existing sectors. It should be noted that the above-mentioned should also fit into the framework of enhancing the resilience of the social-ecological systems.

Appropriate technology need assessments are also required within the tourism sector, the agriculture and fishery sector (rice cultivation, aquaculture). Mitigations are required within the waste production and management sector, as well.

Technology transfer is also required per sector. Other areas in need for technology transfer are the energy sector, the traffic and the replacement of old machines at the industries in Suriname.

Further appropriate knowledge and technology is necessary to utilize the physical processes at the coast, e.g. mud bank formation, sedimentation, erosion, mangrove growth. For this purpose appropriate tools are required and therefore needed to be identified.

Output 1.3.7 Technology Needs Assessment (TNA) to provide Suriname with information on the acquiring and use of technology needed to respond to the needs of GHG mitigation as well as to forward national efforts as they relate to climate change adaptation.

Activities:

- Contract Consultants to prepare a Technology Needs Assessment and agree with them the Terms of Reference.
- Draft follow-up plan of action with recommendations.
- Document and Archive the new report.

Capacity

For all these above-mentioned sectors, capacity building is required. The NCSA assessment will give input for this. Special attention will be given to exchange of information, database access, and interaction between different stakeholders

Output 1.3.8 Capacity Needs Assessment

Activities

- The Project Manager will review of the status of the Constraints and Gaps reported in the NCSA's UNFCCC Thematic Assessment considering the various conventions agreed.
- Draft follow-up plan of action with recommendations.
- Document and Archive the new findings.

Awareness

An important result of this project will be the increased awareness of climate change and its impact on Suriname that will be achieved by the wider participation of stakeholders in the project.

Output 1.3.9 Increased awareness of climate change and its impact on Suriname

Activities

- a. Contract consultant to prepare an awareness plan and agree with him the ToRs.
- b. Establish National Climate Change Web page

1.3.5 Constraints and gaps, and related financial, technical and capacity needs

Output 1 3.10. Gaps and Outputs in implementation of the Convention assessed and reported in the Second National Communication.

Activities

- The status of earlier constraints and gaps will be reviewed and updated, while new constraints and gaps (technical, institutional, methodological, financial, capacity), related to the thematic

areas (inventory, abatement analysis, V&A, mitigation and adaptation) will be discussed and recommendations made to rectify them.

- Summarize the constraints, gaps and needs identified and prepare a draft report for review and consultation.
- Finalize the report after consultation input (feedback) and prepare for use in the SNC.

All components of the SNC are to be prepared in accordance with the requirements and guidance of UNFCCC decision 17CP.8. The following are presented as indicative activities for the Suriname SNC.

National circumstances

The National Circumstances section is expected to provide information on the national context for other sections of the SNC report. This will include information on the climatic, physical, socio-economic, and institutional features of Suriname along the lines recommended in Decision 17CP.8. It is expected that a tabular format will be used for presentation of certain statistical information.

1. Review UNFCCC 17/CP8 and Suriname INC
2. Identify the respective sources of information and establish links to obtain data.
3. Collect data and information.
4. Update information.
5. Draft the National Circumstances section.
6. Circulate the National Circumstances section for comments and incorporate where necessary.

Greenhouse gas inventory

Preparation of a national Inventory of GHG is a requirement for all State Parties to the UNFCCC. The preparation of the inventory is a technical task requiring information from stakeholders in various sectors. It is likely in a number of instances that data required for the inventory is not available so that default values and other variables will need to be used.

If not else recommended by the UNFCCC, the latest Revised IPCC Guidelines for National greenhouse gas Inventories and the IPCC good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and accompanying software will be used. Other IPCC approved data and sources will also be used. Where values and methods other than from the IPCC are used these will be consistent with established methods and transparent in providing necessary source and other information. In accordance with the requirements of Decision 17CP.8, the Inventory will be prepared for the year 2005.

Efforts are aimed at building capacity within Suriname to conduct the GHG Inventory on a sustained basis in line with the requirements of the UNFCCC as well as to provide information on GHG emissions emanating from Suriname.

The following are presented as indicative activities for the Suriname SNC.

1. The GHG inventory team established and strengthened.
 - a. Identify and mobilize national experts in targeted sectors and areas of relevance.
 - b. Identify and mobilize regional and international technical assistance.
 - c. Training conducted of national personnel.
 - d. Review of existing information, tools, and methods.
2. Methodologies for GHG inventory estimates analyzed, selected, and validated.
 - a. Analyze and agree on IPCC Methodologies and other methodological tools to be used.
 - b. Conduct necessary national level training
 - c. Prepare and dispatch surveys for filling data gaps
3. GHG inventory data collected.
 - a. Review available data
 - b. Identify new data needs
 - c. Collect the necessary data
4. GHG Inventory prepared for target years in accordance with decision 17/CP.8.
 - a. Estimate the GHG emissions inventory for 2005 and select years.
 - b. Prepare a draft inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks using IPCC methodologies.
 - c. Develop key sources analysis (year 2005) and develop a key sources inventory for 2005 and undertake uncertainty assessment.
5. GHG inventory data and estimates documented and archived
 - a. Draft GHG Inventory report circulated for technical review.
 - b. National consultation to review Inventory
 - c. GHG Inventory chapter of SNC finalized.
 - d. Archive and document GHG Inventory studies.

Programmes containing measures to facilitate adequate adaptation to climate change

As a country with a low-lying coastline, Suriname is particularly vulnerable to a range of adverse impacts associated with global climate change. These are likely to include changes in rainfall regime, warmer temperatures, more intensified hurricane activity, and increased coastal erosion and inundation. These impacts have the potential for severely disrupting socio-economic development and it is therefore crucial that national capability be developed to assess and respond to these challenges. Activities under the SNC are therefore intended to provide information on the extent of vulnerability to climate change and adaptation measures and to enable strengthening of indigenous capacity to respond in this area.

Various methodological tools have been developed for conducting climate change vulnerability and adaptation assessments. These include tools and approaches developed by UNEP, IPCC, and UNDP. Vulnerability and adaptation assessments will make use of these tools. The possibility for use of computer generated global circulation models will be explored.

Sectors to be examined in the assessments are:

Water resources including forestry

Coastal and marine resources including fisheries

Agriculture

Tourism

Health

Human settlements

The following are presented as indicative activities for the Suriname SNC.

1. Technical Team Established and Strengthened.
 - a) Identify and mobilize national experts in targeted sectors and areas.
 - b) Identify and agree on scope, methods, and tools for assessment.
 - c) Identify and mobilize regional and international technical assistance.
 - d) Training conducted of national personnel.
 - e) Stakeholders introduced to activities.
2. Baseline Data Compiled, Tools, Methods and Scope Agreed
 - a. Develop an environmental and socioeconomic baseline.
 - b. Identify data needs and sources and agree on information surveys.
 - c. Site-specific activities and data agreed upon.
 - d. Ongoing training of technical personnel.
3. Current Vulnerability and Adaptation Assessed
 - a. Identify existing weather and climate risks.
 - b. Identify previous and ongoing adaptive responses.
 - c. Ongoing training of technical personnel.
4. Climate Change Vulnerability Assessment Completed
 - a. Climate modeling activities undertaken.
 - b. Climate change impacts identified and assessed.
 - c. Stakeholder engagement.
 - d. Technical review of vulnerability findings.
 - e. Packaging and dissemination of public information
5. Climate Change Adaptation Options Identified
 - a. Methods and tools identified.
 - b. Adaptation options identified and analyzed.
 - c. Training of national personnel.
 - d. Technical review of adaptation findings.
 - e. Stakeholder engagement.

- f. Packaging and dissemination of public information.
6. Compilation and Preparation of SNC Vulnerability and Adaptation Report and Chapter
- a. Prepare and circulate draft chapter of V&A for review and comments.
 - b. Organize national consultation to highlight findings from the V&A study.
 - c. Finalize the V&A chapter to be submitted as a part of the SNC.
 - d. Archive and document all the V&A related studies and estimates.
 - e. Packaging and dissemination of public information.

Programmes containing measures to mitigate climate change

The ultimate objective of the UNFCCC for the stabilization of GHGs within the Earth's atmosphere will require shifts towards more environmentally friendly forms of energy use. The SNC process provides Suriname with an opportunity to report on measures underway, proposed, or planned in relation to GHG mitigation activities. The coming into force of the Kyoto Protocol, the country's potential for renewable energy production, and the escalation in prices of petroleum-based fuels mean that mitigation issues are critical to sustainable development for the country.

Efforts will need to be made to build capacity for conducting climate change mitigation assessments and identifying potential mitigation opportunities. Opportunities for regional training and data exchange should be pursued.

Priority areas for mitigation assessment are renewable energy technologies (particularly wind, solar, and biomass), electricity conservation and efficiency, motor vehicle efficiency and use, and geothermal energy development. Outputs from ongoing energy policy development activities are expected to feed into the SNC.

The following are presented as indicative activities for the Suriname SNC.

- 1 Mitigation Technical Team Established and Strengthened.
 - a. Identify and mobilize national experts in targeted sectors and areas.
 - b. Identify and agree on scope, methods, and tools for assessment.
 - c. Identify and mobilize regional and international technical assistance.
 - d. Training conducted of national personnel.
 - e. Stakeholders introduced to activities.
2. GHG Baseline Scenario Developed
 - a. Collate data from relevant sectors Conduct required training or have appropriate personnel trained.
 - b. GHG baseline scenario developed for priority sectors.
 - c. Training of national personnel.
3. GHG Mitigation Scenarios Developed
 - a. Develop GHG mitigation scenario for the energy sector for 2005-2025

- b. Develop the GHG mitigation scenario for road transport sector.
- c. Estimate GHG reduction potential against the baseline scenario.
- 4. GHG Mitigation Technologies and Measures Identified
 - a. Undertake technology, environmental, socio-economic, and financial analysis of key options
 - b. Mitigation barriers identified.
 - c. Conduct screening process of technologies.
 - d. Final list of technology and measures prepared.
 - e. Packaging and dissemination of public information.
- 5. Compilation and Preparation of Mitigation Chapter.
 - a. Develop the draft chapter of the Mitigation assessment.
 - b. Circulate the draft chapter of GHG abatement analysis for review and comments.
 - c. Organize national consultation to highlight findings from the GHG abatement analysis
 - d. Finalize the GHG Mitigation chapter to be submitted as a part of the SNC
 - e. Archive and document Mitigation related studies and data.

Other information considered relevant to the achievement of the objective of the Convention

This section provides for the provision of other information considered relevant to the achievement of the objectives of the Convention. This information could include relevant national, social, economic, and environmental policies and activities geared towards the implementation of the Convention including steps taken to integrate climate change into relevant social, economic, and environmental policies.

In the context of addressing climate change at the national level, the following information should be included:

- Activities related to technology transfer,
- Climate change research and systematic observations
- Research to adapt to and mitigate climate change
- Information on education, training and public awareness
- Information on capacity building at the national, regional and sub regional levels

The following are presented as indicative activities for the Suriname SNC.

1. Report on and review the status of the constraints and gaps (technical, institutional, methodological, financial, and capacity) from previous studies.
2. Report on and identify new constraints and gaps (technical, institutional, methodological, financial, capacity), if any related to each thematic area (inventory, abatement analysis, V&A) and indicate required needs.

3. Prepare and distribute the draft chapter for comments, collect comments and reflect in the document.
4. Finalize the chapter for the SNC.

1.3 Constraints and gaps, and related financial, technical and capacity needs

Taking into account Article 4, paragraph 7, and Article 4, paragraphs 3 and 5, of the UNFCCC, the extent to which developing countries like Suriname effectively implement their commitments under the UNFCCC will depend on the implementation by developed countries of their commitments under the Convention relating to financial resources and transfer of technology. Accordingly, it is important that the SNC include information on the constraints and gaps and the related financial, technical, and capacity needs associated with implementing the provisions of the convention in Suriname.

The following are presented as indicative activities for the Suriname SNC.

1. Review the status of the constraints and gaps from previous studies
2. Identify new constraints and gaps for each thematic area
3. Summarize constraints, gaps and needs identified and draft a synthesis report as a separate chapter
4. Distribute draft chapter for comments, collect comments and reflect in the document Institutional Framework for Project Implementation

ATM will be responsible for implementation of the SNC project in Suriname. Among others, the tasks of the ATM are to promote and coordinate the implementation of the various environmental conventions and covenants to which the country is a signatory. The type of institutional arrangements in place will affect the sustainability and success of the project for managing and overseeing the SNC project. The Climate Change Steering Committee will provide guidance to, and have oversight of, technical aspects of project implementation

A Project Manager/Coordinator will be appointed by ATM who will be responsible for delivery of project outputs. In addition to the Project Manager, there will also be need for an Administrative Assistant to perform and oversee certain administrative tasks. See the project management framework below.

Project logical framework

	A	B	C	D
	PROJECT DESCRIPTION INTERVENTION LOGIC	OBJECTIVELY VERIFIABLE INDICATORS (OVIs)	SOURCES OF VERIFICATION (SOV)	ASSUMPTIONS AND PRE CONDITIONS
1	<p>Overall objective</p> <ul style="list-style-type: none"> To mitigate the adverse impacts of climate change 	<ul style="list-style-type: none"> Necessary structures are in place Existing institutional frameworks are strengthened Policies are formulated 	<ul style="list-style-type: none"> Policy documents of the Government National and international reports Commitment of GoS 	<ul style="list-style-type: none"> Political stability International commitment of countries
2	<p>Specific objectives</p> <ul style="list-style-type: none"> To fulfill the international commitment to UNFCCC To contribute to the formulation of national policy and planning 	<ul style="list-style-type: none"> The SNC has been presented at the international forum of UNFCCC top. Climate Change Steering Committee (CCSC) and other Stakeholders urge policymakers to include climate change issues in their policy. 	<ul style="list-style-type: none"> Comments and recommendations given by the UNFCCC/ IPCC Establishment of the CCSC Publications of policy documents and multi annual development plan. 	<ul style="list-style-type: none"> International commitments National and international support
3	<p>Intermediate results</p> <ol style="list-style-type: none"> Fourth GHG assessment have been done Vulnerability assessments of sectors have been updated Vulnerability assessment of some of “new sectors” are determined Future outlook of these sectors are fine tuned Specific mitigation and adaptation measures are identified <p>Technical measures are translated into policy documents</p>	<ol style="list-style-type: none"> Progress report has been presented Draft reports of the various sectors are submitted New sectors are identified and progress has been reported Updated report of future reports have been drafted Reports of the mitigation and adaptations are drafted <p>Progress have been made in translation of the technical documents into policy documents</p>	<ul style="list-style-type: none"> Published intermediate reports of the project Results of seminars/workshops held at the Ministry of ATM Administrations of the Ministry of ATM The established infrastructure for achieving these results. Number of training sessions and trained personnel in Suriname Reports to the Donor 	<ul style="list-style-type: none"> Policy makers & stakeholders agrees on one strategy method to mitigate the adverse impacts of SLR Policy makers seek the best option to strengthen the livelihood of the poorest in the coastal zone Further integration and collaboration between departments and institutions to be enhanced.

4	<p>Output</p> <ol style="list-style-type: none"> 1. Response strategies and mitigation and adaptation measures are identified and elaborated 2. Technical reports are submitted 3. Synergy of different reports has been finalized 4. End report has been reviewed 5. Commitment regarding the publication of SNC is fulfilled 6. All data are accessible and centralized 7. Awareness raised / increased 8. Policy makers and other stakeholders are informed and confident in the elaborated measures and methodology. 9. New projects are formulated 	<ol style="list-style-type: none"> 1. Response strategies and measures are available including the mitigation adaptation options 2. Technical reports are reviewed 3. Status report on synergy has been produced 4. End report has been finalized and made available 5. Final report is presented at national and international level 6. By the end of the project a database is established and accessible. 7. Three workshops at minimum has been organized and regular media news and programs have been performed Furthermore, an awareness program will be dedicated to the private sector and those to be directed impacted by CC 8. Policy makers have adopted aspects of SNC in their policy documents 9. New project have been submitted to the Government 	<ol style="list-style-type: none"> 1.1. Software and models 1.2. Manuals. 1.3. Reports 1.4. Publications 2.1. Guidelines are produced 2.2. Frame work for the technical reports are included 3.1. Necessary training has been fulfilled by an Expert/ Consultant 3.2. Manual, if needed, has been produced 4.1 Workshops have been organized 4.2 International Consultant has reviewed the document 5.1 All comments of other stakeholders are included 5.2 proposal have made to submit the SNC to the UNFCCC 5.3 Policymaker to present this document has been informed 6.1 Campaign reports 6.2 Database (incl. GIS) 6.3 Database Report (list of available data + database manual 7.1 Publications & Awareness Material developed 7.2 Workshops organized and media programs composed 7.3 Special unit proposed for continuing awareness rising 8.1 Workshop invitation flyers 8.2 V&A course material 8.3 Materials for training in developing strategies and elaborating techniques and methods. 9. Project are formulated project are discussed in workshops Projects are accepted 	<p>(Assumptions concerning the purpose/goal linkage)</p> <ul style="list-style-type: none"> - Possible technical problems are solved - Sufficient data to develop strategy and to elaborate methods and measures are available - Technical data is translated into policy document - A sufficient number of staff and stakeholders is trained
---	---	--	--	---

5	<p>Activities</p> <p>1.1. Literature study, including review of all relevant reports and publications</p> <p>1.2. Study of INC and CSCC Suriname</p> <p>1.3. Study of the NCAP-2</p> <p>1.4. V&A Model set-up for the entire country</p> <p>1.5. Model application: case study – t.b.d.</p> <p>2.1. Training in use of certain techniques</p> <p>2.2. training in interpretation of the video data obtained during field visits</p> <p>3.1. Training to the management group</p> <p>3.2 Training to editorial group</p> <p>4.1 Team of specialists has been identified: comments have been given and reworked into the document</p> <p>4.2 support from the int. consultant given</p> <p>4.3 Comments of the NCCS have been reworked into the document</p> <p>5.1. Policymaker has been consulted by the editorial and management group</p> <p>5.2. Workshop has been organized for the policy makers</p> <p>5.3. Comments have been reworked into the document</p> <p>6.1 Set-up of sectoral study (to involve stakeholders)</p> <p>6.2 Field campaigns (visual inspection and measurements if needed.</p> <p>6.3 Database set-up</p> <p>6.4 Develop. of data processing tools</p> <p>7.1 Stakeholders involvement</p> <p>7.2 To arrange for participation to international conferences</p> <p>7.3 To equip Libraries with the required materials</p> <p>8.1. Elaboration of adaptive measures and methodology</p> <p>8.2. Workshop emphasizing the needs pf involving all parties in the project.</p> <p>8.3. Dissemination of results through publications, radio and television</p> <p>8.4. Organization of V&A workshop.</p> <p>8.5. Regional conference dealing with V&A measures</p> <p>9.1. Review necessary data</p> <p>9.2. Site visits & interviews</p> <p>9.3. Project formulation</p> <p>9.4. Presentation of the draft project proposal</p> <p>9.5. Rework of comments final project proposal review</p>	<p>Means</p> <ul style="list-style-type: none"> • Investment items: <ul style="list-style-type: none"> ○ 1 laptop and 1 PC, adequate for running models, printer 1 for printing reports ○ digital camera, ○ beamer for presentations, ○ office materials, ○ order remote sensing pictures of the coastal area and other relevant areas of the country ○ processing of these satellite images • Order Literature/books/journals • Main operational expenses: <ul style="list-style-type: none"> ○ Transportation (land water and air) ○ Overhead (consumable); ○ Technical persons • Number, level and person months of personnel: <ul style="list-style-type: none"> ○ 7 experts (125 mm/yr); 9 members of the CCSC; ○ 1 Contact person from the Ministry of ATM; ○ 1 Project Coordinator • Number of international trips to Conferences: 2 • • Consultancies <ul style="list-style-type: none"> ○ Data base: 1 expert -12 mm/yr ○ Translation technical data to policy document : 1 expert-1mm/yr ○ Project formulation: 1 expert – 3mm/yr ○ Awareness rising: 1 expert – 1mm/yr 		<p>.</p> <p>(Assumptions concerning the purpose/goal linkage)</p> <p>Approval of the project, by which is meant approval of the necessary financing.</p>
---	---	---	--	--

1.4 Assessing Project Impact

The SNC project is expected to enable Suriname to prepare and submit its SNC to the UNFCCC, as well as to allow it to begin to mainstream climate change concerns into development planning.

At the beginning of the project, a practical framework to assess capacity development and the potential impacts of the national communication process will be developed. The framework will identify practical indicators to assess the impacts of the SNC in incorporating climate change concerns into development and sector planning, as appropriate. The project management will collaborate with the National Communications Support Programme (NCSP) on developing an impact assessment framework, linked to the different components of the SNC, and the possible indicators that may be used to assess impacts.

The development of the framework will be a country-driven process that seeks to bring the SNC process closer to development priorities in the context of national policy-making, and is aimed at designing an impact assessment framework that meets the country's needs and priorities in terms 'of facilitating the linkages between the SNC and development issues.

1.5 Detailed Workplan

Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
A. Implementation arrangements and project inception:												
1. Contract the project office staff	X											
2. Establish technical teams	X	X										
4. Organize a project initiation workshop	X											
5. Maintain and upgrade the electronic network among experts/institutions			X	X	X	X	X	X	X	X	X	X
1. National circumstances												
1. Validate the gaps of information identified under stocktaking					X	X						
2. Identify the respective sources of information					X	X						
3. Collect data and information from different sources					X	X	X					
4. Fill the gaps, update and add the new information					X	X	X					
5. Draft the National Circumstances section under the SNC							X					
6. Circulate the National Circumstances section for comment, get comments.							X					
8. Finalize the National Circumstances section under the SNC							X					
2. GHG inventory												
1 The GHG inventory team maintained and strengthened	X											
2. Identify and mobilize national and international experts in targeted sectors and related areas of relevance		X										
3. Review the existing information on the previous GHG inventory and familiarize with guidelines	X	X										
4 IPCC Methodologies for GHG inventory estimates analyzed, selected and validated		X										
5. Analyze the acceptability of the available methodologies estimates		X										
6. Decide on methods and tools to be used for inventory		X	X									
7. Decide on the source categories to which surveys for filling data gaps will be carried		X	X									

Outputs/Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
out												
GHG inventory data collected												
1. Review available activity data already archived		X	X									
2. Identify new activity data needed for estimates of GHG emissions for 2005			X	X								
3. Identify possible sources of data		X										
4. Collect the necessary activity data from the available sources		X	X									
5. Identify gaps.		X	X	X								
A completed national inventory for 2005 prepared												
1. Estimate the GHG emissions inventory for 2015 and select years				X	X							
2. Prepare a draft inventory for 2015 Including key source analysis, and uncertainty analysis.					X	X						
3. Technical peer review performed as part of QA/QC plan						X	X					
4. Organize a national workshop to present findings of the GHG inventory								X				
5. Incorporate comments received from the review process.								X				
6. Finalize the inventory to be submitted for SNC.									X			
GHG inventory data and estimates documented and archived												
1. Archive activity data, emission factors and estimates					X	X	X	X	X	X		

3. Programmes containing measures to facilitate adequate adaptation to climate change (V&A)												
The Vulnerability and Adaptation team established												
1. Identify and mobilize national and international experts in targeted sectors and related areas of relevance		X										
2. Training activities undertaken		X	X	X								
Specific approaches, tools, and methods agreed. Pertinent data and information assembled, analyzed, and synthesized.												

1. Decide on the range of the assessment: scope, approaches, tools and methods		X																	
2. Identify and collect the type and scope of data and information needed		X																	
3. Develop the necessary developmental scenario's and appropriate models and tools supporting this determination																			
4. Develop environmental and socio-economic baselines for use in assessments.		X	X	X															
b. Vulnerability and risk assessment of priority sectors completed																			
1. Refine and utilize scenario modeling to determine magnitude of vulnerability.			X	X															
2. Assess vulnerability of climate and sectors in priority areas/sectors			X	X	X														
3. Organize a national workshop to get feed back for the vulnerability			X	X	X														
4. Public awareness activities implemented			X	X	X														
c. Adaptation measures and action plan identified.																			
1. Develop adaptation response measures				X	X														
2. Adaptation Training measures implemented					X	X													
3. Public awareness measures initiated				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
d.V&A Chapter completed																			
1. Develop the draft chapter of the V&A								X											
2. Circulate the draft chapter of V&A for internal review and comments.									X										
3. Circulate the draft chapter of V&A for stakeholder review										X									
4. Organize a national workshop to present findings from the V&A											X								
5. Finalize the V&A chapter to be submitted as a part of the SNC												X							
6. Archive and document all								X	X	X	X								

the V&A related studies and estimates																				
4. Programmes containing measures to Mitigate climate change																				
1.The Mitigation team established																				
2. Identify and mobilize national and international experts in targeted sectors and related areas of relevance		X																		
3. Training activities undertaken		X	X	X																
Necessary data and information for scenario development collected, analyzed, and taken into consideration for scenario development.																				
1. Consider estimates of GHG inventory for the base year 2015				X																
2. Identify methodological tools and approaches.				X																
3. Collect all relevant macro-economic data and set assumptions				X	X															
4. Identify GHG abatement measures presently being undertaken				X																
5. Review the status of the relevant policy and legal framework				X	X															
6. Training activities undertaken.				X	X	X														
GHG baseline scenario developed.																				
1. Develop a revised baseline GHG emission scenario for energy & transport								X												
GHG Mitigation measures / technology options identified.																				
1. GHG abatement measures /technology options identified.								X												
GHG Mitigation scenario developed / updated																				
2. Develop GHG abatement scenario for energy and transport sectors								X												
3. Estimate the GHG reduction potential and other economic costs for scenarios for energy and transport sector.								X	X											
GHG Mitigation priority measures / technologies identified																				
1. Undertake an assessment of measures and select 3-4 priorities.										X										
2. Identify barriers and policy needs for implementation of										X	X									

such measures.													
3. Training activities undertaken.								X	X				
GHG Mitigation analysis completed for the period 2005-2025.													
1. Develop the draft chapter of the GHG abatement analysis									X				
2. Circulate the draft chapter of GHG abatement analysis for stakeholder review									X				
3. Organize a national workshop to present findings from the GHG abatement analysis									X				
4. Finalize the GHG mitigation analysis chapter to be submitted as a part of the SNC									X	X			
5. Public awareness activities					X	X	X	X	X	X	X		
6. Archive and document GHG mitigation analysis related studies and estimates							X	X	X	X	X		

5. Other relevant information and Constraints, gaps, and related financial, technical and capacity needs													
a. Constraint, gaps and related needs (financial, technical and capacity) identified and reported													
1. Review the status of the constraints and gaps from previous studies			X	X									
2. Identify new constraints and gaps for each thematic area					X	X	X						
3. Summarize constraints, gaps and needs identified and draft a synthesis report as a separate chapter								X					
4. Distribute draft chapter for comments, collect comments and reflect in the document								X	X				
5. Finalize the chapter.									X				
b. Other information considered relevant to the achievement of the objective of the Convention													
1. Collect, synthesize and provide the overall information relevant to the			X	X	X	X							

Article 6 activities																				
2. Collect, synthesize and provide the information on steps taken to integrate climate change into socio-economic policies.				X	X	X														
3. Collect, synthesize and provide information transfer of and access to environmentally sound technologies.						X	X	X												
4. Collect, synthesize and provide information on the research and systematic observation systems						X	X	X												
5. Collect, synthesize and provide information on other relevant ongoing projects						X	X													
6. Summarize all the information collected in a draft chapter. Distribute it for review and comments internally.							X													
7. Incorporate comments to draft chapter and finalize report.							X	X												
8. Public awareness activities undertaken					X	X	X	X	X	X										
6. SNC produced, translated, submitted and disseminated																				
1. Compile draft of SNC										X										
2. Circulate the draft for comments and review and incorporate them										X										
3. Obtain political approval											X									
4. Finalize the SNC																			X	
5. Publish SNC																			X	
6. Submit SNC to the COP of the UNFCCC																			X	

1.6 Risk Log

OFFLINE RISK LOG

Project Title: Suriname's Second National Communication to UNFCCC (SNC)	Award ID:00044029	Date:
--	--------------------------	--------------

#	Description	Category	Impact/Probability 1=Low 5=High	Countermeasures/ Mgt. Response	Owner	Author	Date identified	Last update	Status
1	Large-scale natural disaster	Environmen	I=3 P=1	None		UNDP	March 2009		
2	Heavy rainfall and flooding in the coastal areas and the interior	Environmen	I=3 P=3	More focus on disaster preparedness indicators and planning		UNDP	March		
3	Donor (GEF) does not continue funding of project	Financial	I=4 P=1	LPAC on quality project that addresses all parties' concerns		UNDP	March 2009		
4	Difficulty to create real partnerships with participating govt.& non-govt. stakeholders	Strategic	I=2 P=4	Several stakeholder consultations from the beginning and in all stages included in prodoc		UNDP	March 2009		
5	Insufficient support from high policy level	Strategic	I=2 P=4	Effective awareness activities from the start of the project		UNDP	March 2009		
6	Govt. has limited capacity to manage the broad scope of activities	Programmat	I=4 P=4	Project designed as much as possible with capacity building approach; however need to accept direct support from international experts		UNDP	March 2009		
7	Insufficient support to build a consistent data management system	Programmat	I=3 P=3	Prodoc includes several activities and funds		UNDP	March 2009		
8	Delay in project implementation	Programmat	I= 2 P=2	Regular monitoring activities and support from CO		UNDP	March 2009		
9	Insufficient staff capacity to absorb project activities/staff too busy with normal functions to contribute adequately	Operational	I=4 P=4	Pro includes emphasis on capacity building and linkages with other capacity building projects Still this will continue to be a risk		UNDP	March 2009		
10	Insufficient capacity to implement new IPPC guidelines	Operational	I=3 P=2	This aspect is to be reviewed annually and adjustment measures to be taken		UNDP	March 2009		
11	Difficulty in applying HACT and NEX procedures could	Operational	I=2 P=4	Highly qualified programme manager to be recruited ; inception workshop		UNDP	March 2009		

	cause delays esp. in first year of project			and NEX training provided at start of project .UNDP to provide continuous on-the-job support					
12	Difficulty in finding high-quality international Specialists	Operational	I=2 P=2	UNDP has world-wide roster of very good experts		UNDP	March 2009		
	Difficulty in finding high-quality national Specialists	Operational	I=3 P=4	Early start of establishing specialist data base required		UNDP	March 2009		
13	Selection of relevant stakeholders for consultations and for training/seminars etc.	Operational Political	I= 4 P=3	Selection to include more than existing lists with focus on communities that might be impacted by CC. To be monitored closely .		UNDP	March 2009		
15	ATM unable to strengthen its function in coordinating CC due to political pressures	Political	I=4 P=3	Cannot be influenced by project; however project can demonstrate important usefulness		UNDP	March 2009		
17	Elections in 2010 may change priorities and course of direction of the project	Political	I=3 P=2	SNC report preparation processes are not “political” in nature , but decision to submit the report might be delayed.		UNDP	March 2009		

APPENDIX C: TERMS OF REFERENCE

TOR for National Project Manager

Working within the framework of the Ministry ATM, the Project Manager (PM) will be responsible for the management, co-ordination, and supervision of the implementation of the SNC project. Specifically, responsibilities include are but not limited to:

- Supervising and ensuring timely implementation of the project relevant activities as scheduled in the working plan;
- Preparation of a detailed work plan for the project and draft terms of reference for the subcontracts;
- Timely and accurate preparation and submission of quarterly and other financial and project reports to UNDP;
- Developing the scope of work and ToRs and other procurement documentation required to identify and facilitate recruitment of experts and consultants;
- Supervise project support staff and consultants who are recruited to provide technical assistance
- Organize and supervise the workshops and training needed during the project;
- Liaison with relevant ministries, national and international research institutes, NGOs, and other institutions in order to involve their staff in project activities, and to gather and disseminate information relevant to the project;
- Preparation of periodic progress reports of the project;
- Control the expenditures and otherwise ensure adequate management of the resources provided for the project;
- Works with relevant national authorities to ensure that the SNC process is in the line with guidance provided by the COP of the UNFCCC and contributes to the improvement of the UNFCCC reporting process.

Qualifications and Experience

- University degree in environment-related studies or related disciplines;
- Good understanding of environment/development issues;
- At least five years senior project management experience relevant to the project;
- Excellent communication (Written and Oral) Skills;
- Demonstrated experience in project management;
- Demonstrated experience in working with government, donors and the United Nations system;
- Appropriate experience working with government structures at local levels, and working with NGOs and private sector;
- Substantial experience in Government and in inter-departmental procedures preferred
- Familiarity with international negotiations and processes under the UNFCCC
- Familiarity with computers and word processing

TOR for Project Technical Advisory Committee (TAC)

The TAC is expected to provide technical support and oversight to project activities including:

1. Providing technical assistance and support during implementation of project activities.
2. Review and monitor all technical project components.
3. Review and make necessary comments on draft documents prepared by the national climate change teams
4. Receive information and offer guidance on the status of the implementation of the project activities and problems.
5. Promoting awareness among key stakeholders of climate change issues and concerns
6. Facilitating exchange and dissemination of information on climate change among technical agencies in Suriname and
7. To provide recommendations to policy makers and the public on matters related to climate change.

The TAC will be assisted in its work and deliberations by the PM who will attend meetings of the TAC as an ex officio member. The TAC will agree on its own working procedures but shall meet at least three times annually.

TOR for GHG Inventory Consultant

A national GHG inventory consultant is required to work in consultation with, and under the guidance and supervision of the National Project Manager. Specifically the GHG consultant will be required to:

- Assist in establishing the team of experts for performing the GHG inventory on the basis of the roster of experts;
- Provide the training sessions on GHG inventory using approved IPCC methodologies and guidance material;
- Prepare a detailed work-plan for GHG inventory exercise on the basis of the overall project work plan;
- Preparation of GHG Inventories for Suriname for 2005 and select years, utilizing IPCC methodologies and guidance materials and in accordance with the requirements of decision 17CP.8;
- Identify gaps and key sectors for the GHG inventory;
- Identify and recommend on measures for enhancing institutional arrangements for preparation of the inventory in Suriname;
- Prepare and submit to the Project Manager a draft copy of the GHG Inventory;
- Incorporate appropriate comments received from the review process;
- Draft the National Inventory Report for the SNC including an executive summary.
- Submit the report to the National Project Manager.

TOR for Vulnerability and Adaptation Assessment Consultant(s)

A consultant is required for coordination of activities relating to undertaking climate change vulnerability and adaptation assessment for Suriname, including the preparation and submission of the report to the relevant authorities.

The consultant(s) is expected to have conducted similar previous activities and to be familiar with the country. The consultant is expected to utilize documented and internationally recognized scientific and technical methodologies, tools, and approaches. These should include approaches developed by the IPCC, UNEP, UNFCCC, and UNDP.

The consultant's activities are expected to contribute towards capacity building in Suriname and should be aimed at transferring skills and awareness to participants in the assessment activities.

In carrying out the assessment, the consultant will be expected to inter alia:

- Elaborate on the scope (geographic, thematic, sectoral coverage, time horizon) of the V&A study;
- Design a strategy to build on but advance what was done within INC;
- Elaborate on the scope of studies to address sectors/regions identified as sensitive/vulnerable to climate change,;
- Preparing a detailed work plan for each component of the study to be carried out, including a strategy to involve the relevant stakeholders;
- Guiding and supporting the consultants involved in this V&A part of the SNC. If needed the consultant should master and perform the integrated models, result of which should be disseminated among other consultant
- Designing a strategy, as applicable, to link the V&A studies with previous and ongoing related projects/activities (e.g., land degradation, biodiversity, international waters.)

TOR for Mitigation Consultant

The GHG Mitigation consultant will work in consultation with and under the guidance and supervision of the Project Manager. The consultant is expected to utilize internationally recognized and accepted methods and tools.

Specifically, his\her responsibilities include but are not limited to the following:

1. Assist in establishing the team for performing the GHG mitigation analysis;
2. Preparation of a detailed work-plan for GHG abatement analysis on the basis of the overall project work plan;
3. Lead the data and information collection process;
4. In consultation with the Project Manager, decide on methodologies for the conduct of the mitigation assessment including elaboration of scenarios for the priority sectors;
5. Have technical responsibility for preparation of the GHG Mitigation report for the SNC;
6. Facilitate relevant consultations/workshops;
7. Facilitate training and capacity building activities;
8. Ensure synergy with other relevant national, regional and international projects;
9. Ensure the timely and effective management of the activities as scheduled;

10. Incorporate comments received from the review process;
11. Work in close cooperation with other lead authors of the SNC.
12. Draft the GHG Mitigation assessment Report and respective chapter of the SNC along with the respective part of executive summary.

Generic Terms of reference for scoping and implementing the V&A component of the National Communication

These generic terms of reference for the preparation of the V&A studies identify the basic set of activities that the V&A expert/consultant will be responsible for under the supervision of the National Communication's Coordinator. It is important to note that these generic terms of reference do not intend to limit the work of the expert but to guide countries on the general profile of the V&A expert and on the activities generally expected to be carried out.

Profile of the V&A expert/consultant

The V&A expert should be very knowledgeable and with hands-on experiences on V&A issues, have a solid understanding of the gaps and needs for developing/improving vulnerability assessments, and have technical expertise in the formulation of adaptation options. The V&A expert should be able to scope technical studies in the V&A area and design an implementation strategy to carry out the different V&A activities within the framework of the NC. She/he should also have a solid understanding of the institutional arrangements and resources required to carry out the V&A work.

Although the NC project document already provides the framework for the V&A studies, the expert should be able to advise on any adjustments if needed, both at the organizational and technical levels, for a successful implementation of the V&A studies.

Activities

In general, the V&A expert/consultant should be responsible for ensuring that the following set of activities is carried out. Emphasis on different activities will depend on the scope of the work already described in the NC project document and/or on the specific activities, the V&A expert would be assigned to.

Policy and institutional issues

1. Identify the key policy issues the V&A study of the SNC project aims to address, e.g.,
 - a. to scope the scale of risks associated with projected climate change;
 - b. to aid in the identification of priorities for adaptation;
 - c. to support the development of a national adaptation strategy.
2. Identify the expected output of the V&A study of the SNC project on the basis of the project document, e.g.,
 - a. impacts assessment at the sectoral level for the given priorities identified in the project document;
 - b. a national adaptation strategy, including policies, programs, and projects.
3. Develop a clear strategy to link the V&A outputs to national development planning. This would include, among others:

- a. assessment of institutional arrangements/stakeholders engagement required to facilitate linking the outcome of the V&A studies to sectoral or national planning;
- b. framework for assessing how the above linkage can be monitored and measured in the short and long terms, for instance through the development of practical indicators.

Technical issues

Scope of the V&A study

Elaborate on the scope (geographic, thematic, sectoral coverage, time horizon) of the V&A study, e.g.,

- a. designing a strategy to build on but advance what was done within INC;
- b. elaborating on the scope of studies to address sectors/regions not covered by INC, sectors/regions identified as sensitive/vulnerable to climate change, as per the SNC project proposal;
- c. preparing a detailed work plan for each of the study to be carried out, including a strategy to involve the relevant stakeholders, timeline, etc.;
- d. designing a strategy, as applicable, to link the V&A studies with previous and ongoing related projects/activities (e.g., land degradation, biodiversity, international waters.)

Methodological framework

Elaborate on the overall methodological framework for the V&A study as per the project document and in consultation with the project coordinator. In doing so, the V&A expert should ensure that:

- a. The proposed methodological framework is the most appropriate given the policy questions to be addressed, the characteristics of the study (e.g., sectoral focus, spatial and temporal scales, stakeholders involved, and data requirement, etc.), and data availability;
- b. In-country expertise required for such a methodological framework is available. If needed, the V&A expert should develop a strategy to address technical capacity gaps. For instance, by exploring the possibility of applying another framework in which more in-country expertise exists, or by designing a training/technical backstopping strategy, etc.

Scenarios development

Identify the types of scenarios required to conduct the V&A assessment, e.g., climate, socio-economic, sea level, adaptive capacity, technology, land-use land-cover.

Identify the temporal and spatial resolution needed for these scenarios (e.g., national, sub-national, watershed, community, farm level, multi-decadal average, annual, monthly, daily, mean conditions, extreme events, etc.). In doing so, the expert should justify the choices.

Develop the strategies for developing such scenarios, e.g., model-based, expert judgment, etc. In the preparation of the scenarios development strategy, the expert should assess the feasibility of the scenario needs and the methods for developing these scenarios, given the characteristics of the studies, and data availability. For instance, the expert would be expected to advice on alternative options to running regional climate models or other resource

intensive and time-consuming exercises. The V&A expert would also assess whether there is enough in-country expertise to develop such scenarios and/or identify options to address the needs for additional expertise.

Sectoral assessment (to be considered by each of the sectors to be covered in the V&A study)

Elaborate on the methods and tools, as per the project document, chosen to undertake sectoral assessments, e.g., numerical models, elicitation of expert views, stakeholder consultations, focus groups, etc. In doing so, the expert will advise on any adjustments needed to the options identified in the project document.

Provide justifications for the selection of the methods/tools considering the research questions, characteristics of the study, and requirements of data and technical expertise of these methods/tools.

Assess in-country expertise required to apply the selected methods/tools and prepare training/technical backstopping strategy as required.

Develop a strategy to integrate findings from sectoral assessment, as needed: for instance, by applying an integrated model, synthesizing sectoral information, etc.

Technical assistance needs

Develop a technical backstopping/training strategy to strengthen the national capacity needed to carry out the different V&A studies, This would include details on the type of support needed (training courses on particular methodological frameworks/tools, guidance material, technical documents and good practice) and the, time line for such support.

APPENDIX D: CLIMATE CHANGE SELF ASSESSMENT REPORT

NIMOS

Under the Authority of: The Ministry of Labour, Technological Development and Environment (ATM)

Table of Content

- Background
- Objectives Self Assessment
- Methodology
- Assessment:
 - Process First Communication
 - Activities after First Communication
 - Synergies
- Lessons learned
- Main priorities for Second National Communication

ANNEXES

Background

Suriname became party to the UNFCCC on 14 October 1997 and has the status of a non-Annex I country. In December 2006 Suriname ratified the Kyoto protocol.

The total land area of Suriname is about 164,000 km². In 2004 Suriname had about 492,000 inhabitants. The average annual population growth for 1980 – 2004 was approximately 1.37 %. Compared to many other countries in the world, the population density is low and equals to about 3 inhabitants per square kilometers. However, the largest part of the total population, approximately 68%, lives in and around the Capital Paramaribo. The remaining 32% is spread over small towns in the coastal districts and in tribal communities along rivers in the interior.

Suriname is particularly vulnerable to the negative impacts of climate change due to its characteristic of low lying coastal zone. This area is Suriname's most fertile land, where most economic activities are practiced and where the population is mostly concentrated. Although Suriname barely emits greenhouse gases, because of the low development of industries, sea level rise may inundate large parts of the coastal zone. The impact of sea level rise is therefore significant, and can be catastrophic for the country. Hence, Suriname's highest concern is the vulnerability rate of the coastal zone.

Being aware of these negative impacts, the Government policy has been directed towards as less as possible interference with the existing natural systems, while making use of the natural resources for the benefit of the nation. This policy has led to the establishment of several protected areas in the coastal zone and in the Interior of the country. Suriname will continue to promote conservation of large forest areas in an effort to maintain biodiversity and consequently the various ecological systems, creating hereby large pools of carbon stocks. In this regard it is important to follow the developments or discussions on the topic of "avoided deforestation".

Even before the ratification in 1997, the Government of Suriname supported activities related to Climate Change. With assistance of the Ministry of Foreign Affairs of the Dutch Government, a Netherlands Climate Change Studies Assistance Programme I (NCAP I) was implemented by a group of both Dutch and Surinamese experts. In the light of this programme, a number of climate studies were carried out from 1996 – 2001. The research in the coastal zone focused on the following 4 areas: geomorphology, ecology, socio-economy and hydrology. Part of these studies regarded GHG inventories. Although these GHG inventories were based on expert judgment, it was considered to be a good starting point for future inventories such as the First National Communication in 2005.

The Ministry of Labour, Technological Development and Environment (Ministry of ATM) has the lead responsibility for the preparation of the coordination of Environmental policy in Suriname. The Ministry is also in charge for the implementation of a number of multilateral environmental agreements Suriname is signatory to. The National Institute for Environment and Development in Suriname (NIMOS), as the technical working arm of the Ministry, is assisting the Ministry in the implementation of the UNFCCC whereby it coordinates the formulation of national reports and studies.

In November 2004 the Minister of ATM installed a Climate Change Steering Committee consisting of representatives from different relevant sectors such as energy, industry, agriculture, forestry, etc. Also the Meteorological Services and the University are represented. With this committee the government aims at effective coordination of climate change issues in Suriname in order to formulate a balanced climate policy with broad support.

In 2005, Suriname's First National Communication to the United Framework Convention on Climate Change was published. The revised 1996 IPCC guidelines were used to inventory the greenhouse gas emissions. The inventory encompasses the following sectors: Energy, Industry, Solvents, Agriculture, Land Use Land Use Change and Forestry, and Waste. Emission data from international bunkers and marine bunkers are also included. Carbon dioxide accounts for most of the greenhouse gas emissions in Suriname. The total green house gas (GHG) emission for the inventory year 2003 equals to 8,902Gg of CO₂ Equivalent. The total CO₂ Removals (GHG sinks) in Land-Use change and Forestry equal 3,862 Gg of CO₂ equivalents, making the net GHG emission equal to 5,040 Gg of CO₂ equivalents. The energy sector is the largest GHG source, contributing about 71% to the total GHG emission and comprises primarily the combustion of fossil fuels, then follows Land-Use Change and Forestry and, Agriculture.

Currently the Government of Suriname is in the phase of preparing a national climate change action plan. The draft action plan focuses on both Mitigation and adaptation measures. But as a non-Annex I country, Suriname's climate change action plan will mostly focus on adaptation.

Objective

The main objective of the assessment is to meet the convention requirement by enabling Suriname to prepare and submit a Second National Communication to the UNFCCC.

The medium and long term objective is to strengthen technical and institutional capacity to assist Suriname to mainstream climate change concerns into sectoral and national development planning priorities.

Methodology

In order to assess both the work carried out under and climate change activities undertaken after the First National Communication (INC), two sets of questionnaires (see Annex 2 & 3) were formulated. Going through these questionnaires was done by conducting one-on-one interviews with individuals and experts involved in both coordinating and formulating the INC. Worth mentioning is that not all experts involved in the formulation of the INC were interviewed, but only a total of 8 experts did participate.

The questionnaire on the work carried out under the INC encompasses the following subjects or areas: the relevancy of the subjects (chapters) and expertise involved in the INC, proposed subjects for the SNC and adjustments of the INC, the strengths and weaknesses of data collection, and the lessons learnt by the experts.

With respect to the questionnaire on the climate change activities carried out after the INC, the following subjects or areas are covered in the questionnaire: climate change policy and the actors, activities carried out by the government and others within the framework of the INC, activities undertaken under UNCBD and UNCCD, present and future activities to combat climate change.

The Assessment

Work carried out under the INC

Most of the interviewees stated that the subjects (chapters) in the INC were relevant for Suriname. On the other hand, a few interviewees raised some interesting points on the relevancy of the subjects (chapters) in the INC, namely:

- the focus was too much on the coastal zone, perhaps due to previous and historical studies that focused mostly on this area;
- the chapter, Abatement & Mitigation, was based on the “main polluter” approach (Annex 1 countries), which made it not relevant for Suriname since it is a non-Annex-1 country;
- some calculations were not relevant such as those for deforestation on the long-term. A period of 4 years was considered, which according to the expert is not long enough for Surinamese circumstances to see changes;
- too scientific, perhaps reason for the general public not to be interested in the INC.

With respect to the expertise involved, all interviewees found it to be sufficient for the scope of work. All interviewees indicated that the combination of international and local consultants together with the project coordinator was a good approach. Nevertheless, some experts found it difficult to determine certain values due to the limited technology available. For example, although default values were given for emissions, the expert had to estimate certain values due to the limited technology available. Furthermore, it was mentioned that cooperation between experts from the different chapters was minimal.

In the area of data collection the interviewees indicated the following:

1. Strengths

- well organized institutes and companies were able to provide excellent information;
- the experts involved in the formulation of the INC were employed at institutes or organizations that played a major role in submitting the necessary data;
- most experts made use of their personal archives.

2. Weaknesses

- for some issues data was lacking or insufficient. In order to possess the data, the experts would have had to conduct measurements. There was (is) limited to poor analysis of the problems that contribute to climate change. In some instances, the experts used data for other countries with similar conditions as Suriname;
- lack of time made it impossible to research for additional or more data and feed-back with other consultants. A comparison was made with the *Country Study Climate Change* also known as the NCAP I 1996, which had a duration of 24 months;
- as individual consultant and even with a letter from the project management, it was difficult for the experts to be provided with data from certain organizations;
- lack of awareness and insights with respect to climate change by the consultants and the public in general, was an obstacle to obtain maximum involvement;
- Information/data exchange between consultants was limited to nonexistent.

For the INC formulation process itself, the interviewees made some general comments. Firstly, they indicated that the period set for the formulation of the INC was too short because little to nothing was published for certain areas. Therefore, the experts had to pursue other venues to get to the necessary data. Secondly, with respect to the chapter, Abatement & Mitigation, one interviewee indicated that it would have been helpful if some figures or values had a frame of reference in order to qualify the status of being (the good or bad status). Thirdly, another interviewee mentioned that the content of documents or work submitted for the formulation of the INC was never discussed.

Climate Change activities carried out after the INC

Following the preparation of the first national communication, Suriname has been involved in the implementation of a number of climate related projects. Different institutions have been involved in the implementation of these projects. But it is noteworthy to mention that since there are few Climate related experts in Suriname, almost the same persons are involved in these different projects.

Netherlands Climate Change Assistance programme phase II (NCAP II)

The NCAP II is a follow up on the NCAP I and is implemented by the Ministry of ATM. It is an initiative of the Ministry of Foreign Affairs of the Netherlands and is an outcome of one of the requirements of the UNFCCC to assist developing countries with adaptation. Formally NCAP II started in 2003 for a term of 5 years. The programme was divided in 2 phases. For the first phase a project named “Promotion of sustainable livelihood within the coastal zone of Suriname with emphasis on Greater Paramaribo and the immediate region” was formulated. The purpose of this project was to contribute to the formulation of national policy and planning. Currently adaptation measures have been formulated. It is planned that during the second phase of the NCAP II the formulated adaptation measures will be implemented. It must be stated that this project is behind schedule. Limited expertise resulted in heavy workload for the experts involved, subsequently resulting in impediment of the project.

STAR project

This project was a joint effort of European and Japanese research groups to establish a shared atmospheric observatory in Paramaribo, Suriname. The overall objectives were to facilitate access of European and other research groups to the tropical observatory and to strengthen the observation network in the tropical regions by expanding the instrumentation and facilities of the Paramaribo observatory. The project involved:

1. A significant upgrading of the site to be able to host additional instruments and visiting scientists
2. Development of site coordination plan
3. Short pilot studies to assess the feasibility and requirements of operating several additional instruments at the site

4. The development of a program to intensify the collaboration between local scientists and other partners of the Paramaribo observatory
5. Retrieval and homogenization of historical observational data from the region

This project was considered to be successful. The overall objectives were met. Only a curriculum for Climate Change studies for the Anton de Kom University of Suriname was not realized.

Summer Research School March 2006

This Summer Research School was held in 2006 as part of a larger EU-Star project, a joint effort of research groups from Europe, Suriname and Japan to establish a shared atmospheric observatory in Paramaribo, Suriname. Some of the key topics, which were discussed during this training session, were the dynamical processes in the tropical atmosphere, atmospheric chemistry of the tropics, Satellite observations of the chemical composition of the tropical atmosphere. This summer school was intended for advanced students interested in environmental science or related fields, as well as researchers involved in tropical atmospheric research. A number of Government officials also attended training. This training also provided the opportunity for discussion amongst the participants on issues of climate change and the impact for Suriname.

Climate Change Awareness Programme

As part of the GEF/UNDP funded project “Enabling Suriname to its initial communication in response to its commitments to the UNFCCC, SUR/98/G31” the National Institute for Environment and Development in Suriname (NIMOS) implemented an awareness plan for three months. This awareness programme was a follow up on the publication of the First National Communication. The goal of this awareness project was to educate Surinamese citizens and to increase public awareness on global climate change and its impact on Suriname. A media campaign was set up for the program. This campaign started with a special launch for the media in Suriname. Flyers, stickers, bookmarks and Information toolkits were distributed amongst high schools, specials brochures with instructions for the media on how to communicate the issue of climate change were distributed. Also a documentary called “Climate Change-A reality- was broadcasted on various TV stations for three months as well as short T.V spots and weekly publications on climate change in the daily newspapers. A drawing competition also received enormous attention from the public. These 3 months were concluded with a climate change exhibition whereby all the awareness materials and the drawings of the competition were displayed. The quality of the deliverables of this project was excellent, but the execution period was too short. The main constraint was the limited available funds, which resulted in a limited execution period. The limited execution period made it impossible to reach a greater number of citizens and thereby fully meet the goals of the project. It appeared that there is an urgent need for information on the topic, which is the reason why NIMOS is currently looking for financial resources to repeat the awareness program.

Ratification of Kyoto Protocol and Preparation of CDM Workshop

Suriname ratified the Kyoto Protocol in July 2006. In light of the Kyoto Protocol, Suriname can benefit from the project “Capacity Development for Clean Development Mechanism” (CD4CDM) that is an initiative funded by the Netherlands Government and implemented by UNEP RISOE CENTRE (URC) in Denmark. The CDM capacity development activities will aim at enabling Suriname to fully engage as partners in the global carbon market. Capacity development activities will include support for the establishment and put into operation a Designated National Authority (DNA), provisions of hands-on, practical capacity building workshops for relevant CDM stakeholders including civil servants, local experts and consultants, academia, financial institutions and staff members of the DNA. The capacity building efforts will also aim at the formulation of a national CDM project portfolio, CDM brochures, and a national CDM website to be hosted by the DNA. By the end of the project, Suriname will be able to identify, design, approve, finance and monitor CDM projects that both address their sustainable

development priorities and offer cost-effective options for carbon credit buyers to comply with the Kyoto protocol. In order to have the all-relevant stakeholders on board in the CDM process to, the Ministry of ATM organizes a number of stakeholder consultations. Consultations were already held with private sector, financial institutions and key government institutions. In June 2007 a mission of URC visited Suriname for a “needs assessment”. Currently, one national workshop and two training workshop have been organized. A national CDM website has been launched in March 2009 (www.cdmsuriname.com) and a CDM Investors’ guide and CDM brochures have been formulated. The Ministry of ATM is also in the process of establishing a DNA.

Preparation of National Climate Change Action Plan

As part of the UNDP GEF funded project “Enabling Suriname to its initial Communication in response to its commitments to the UNFCCC, SUR/98/G31” the NIMOS started a process to develop a National Climate Change Action Plan. The National Climate Change Action Plan will identify the activities and targets to mitigate and abate the adverse impacts of climate change. A number of stakeholder meetings were held in the planning process. Vulnerable coastal areas, which will be directly impacted by climate change, were identified and the communities living within these areas had the opportunity to contribute to this planning process. During a large stakeholder meeting the first draft of the Action Plan was discussed.

A major constraint is that the Action Plan will mainly focus on mitigation and adaptation within the Coastal Zone of the country. This is mainly due to the lack of scientific baseline information of the Interior of Suriname. Currently the Ministry of Labour, Technological Development and Environment is looking at possibilities to include the Interior within the Climate Change Action Plan.

National Capacity Needs Self Assessment

The general objective of this project is to identify and determine the critical capacity constraints and capacity building priorities to address global environmental issues in Suriname. The proposed project will also prepare a national strategy and action plan for addressing those constraints. The project will focus on synergies between the three Rio Conventions; namely the UN Convention to Combat Desertification, the UN Framework Convention on Climate Change and the UN Convention on Biological Diversity. Under the NCSA project the thematic assessments of the country’s performance and achievements to these three conventions was completed in August 2008. The cross-cutting analysis on the possible synergies and the priority capacity needs that relate to more than one of the conventions was finalized in December 2008. After this analysis the Capacity Development Action Plan was developed. The Capacity Development Action Plan identifies a program of capacity development actions and recommended goals, objectives and strategies for implementation. The Capacity Development Action Plan was finalized in April 2009. The whole NCSA process is summarized in a NCSA Report which highlights the major conclusions and lessons from the NCSA. The NCSA Report was finalized in May 2009.

Integrated Coastal Zone Management

Over the past decades, the Government has undertaken a number of studies on its coastal zone that have examined natural resource use and environmental management, with the long term objective of developing a plan for sustainable management for this fragile and partly still pristine area. In 2005, the Government with assistance of the Inter American Development Bank, developed a comprehensive terms of reference to prepare a Master Plan for Integrated Coastal Zone management.

During the discussions in the Climate Change action planning process, integrated coastal zone management is mentioned as first priority for adaptation. Since the statutory authority for natural resource use, environmental management and nature conservation rests within a number of government

institutions it will be challenging for the Government to designate an authority responsible for coordinating integrated coastal zone management.

Synergies with Relevant Initiatives

Suriname is involved in implementation of a number of multilateral environmental conventions. These include the UN Convention on Biological Diversity (UNCBD), the UN Convention to Combat Desertification (UNCCD), and the Montreal Protocol for protection of the Ozone Layer. The country is involved in implementation of its GEF national capacity self-assessment (NCSA) and this is expected to result in identification of opportunities for enhanced synergy in implementation of programs related to these conventions.

The implementation of the NCSA has among other things served to increase people's awareness of climate change and the links to other ongoing sectoral programs. Limited capacity within Suriname for implementation of these conventions is a major constraint and points to the significance of integrating and coordinating action among the conventions where possible, so as to maximize use of limited national technical capability as well as drawing on regional sources for technical assistance and cooperation (e.g. exchange of information, joint training).

It is also important that the SNC be closely linked to other ongoing development initiatives such as those for tourism development, agricultural diversification, and environmental health. Training and sensitization activities for technical personnel, and more general public awareness measures, are intended to establish links with development planning and project implementation activities in private and public sectors.

Since climate change deals with almost all activities and therefore functions as an umbrella for all ongoing, planned and future activities, it is important consider its value in a way that is reflected in the policy documents of the governmental departments and institutions. The SNC should facilitate this and enhance this process.

Lessons Learned

When asked which lessons were learnt, the interviewees mentioned the following:

1. Although the experts chosen were cut out for their work, most of them indicated that the INC process gave them more insight into the phenomenon, Climate Change;
2. The INC process was a very instructive period for most of the experts;
3. The IPCC model was very important for the inventory;
4. Permanent capacity building programs are required to guarantee specific expertise for the different areas of climate change;
5. Communication among experts in the different chapters was good, especially the expert meetings within the groups was fruitful. Nevertheless, the cooperation between experts from the different chapters was lacking;
6. Most of the interviewees mentioned that the Project Management was weak and it had poor communications with the Consultants. Worth mentioning is that the interviewees had the impression that the project manager was not abreast with climate change issues, especially what was going on internationally at that time. For the experts, perhaps the reason why the facilitation of their work was so weak;
7. Poor administrative transactions, especially the contractual commitments were in some instances never met. Some experts still have not been paid for work done;
8. during the gathering of data it appear that those submitting it did not realize the importance of data for planning;

9. Most of the interviewees indicated that the formulation of the INC created awareness among the stakeholders, especially those submitting data or information. Prior to the formulation of the INC only a few people or institutes were knowledgeable about climate change;
10. The input of third parties was immensely important, but it could not be said for certain if the data submitted was reliable. The methodology to come by the data/information was not clear.

Main Priorities or Suggestions for the SNC

Most of the interviewees indicated that the SNC should be fitting for and reflect the national circumstances. A major omission in the INC was the inclusion of circumstances in the Interior of Suriname. Since it will be expensive to cover the entire Interior, it was suggested that specific issues be addressed such as land use (by mining and forestry sector), water basins, shifting cultivation, etc. Furthermore, it was mentioned that the SNC should be more specific, result-oriented and subsequently lead to increase international and national investments in abatement and mitigation of climate change. Specifically, the interviewees mentioned the following priorities or suggestion for the formulation of the SNC:

- prior to commencement of and during the formulation, implement an awareness program to inform the public in general, but specifically those individuals or organizations submitting data, on the importance and relevancy of the SNC process;
- consider a longer period for formulation of the SNC;
- maintain the project management structure (international consultant, local project management and local consultants per chapter). The project management should coordinate and facilitate much more as well as promote cooperation and discussions between consultants;
- consider contracting institutes or organizations instead of individual consultants/experts for certain issues, which require specific research, because they possess a greater infrastructure;
- with regard to the content of the SNC, some interviewees mentioned the inclusion or consideration of the following areas:
 - integration of the chapters, Emission Inventory and Emission Abatement
 - increase the use of models (conduct in depth studies) in the areas, Vulnerability and Adaptation
 - include chapters or address issues about *Legal and Political Framework, Social Welfare, Infrastructure(Wet), Urban Planning, Transboundary Impacts of Climate Change, Developments in the Transport Sector, and Land Use & Land Management Financial and Technical Support to Introduce Environment-friendly Technology*
 - to increase government support and indicate national commitment, it was suggested that the President of Suriname and Minister responsible for Environment addresses be embodied in respectively the Preface and Foreword section of the SNC
 - include acknowledgment of all consultants/experts

Annex 1

Individuals Interviewed

1. Henna Uiterloo, Coordinator Milieu Sectie van Ministerie Arbeid, Technologische Ontwikkeling and Milieu
2. Jeanine den Hartog-Parisius, Consultant National Capacity Self Assessment Project

Consultants/Experts of the INC

3. Siewnath Naipal, Lead Consultant Chapters *Vulnerability/Adaptation* and *Science/Monitoring*
4. Cor Becker, Lead Consultant Chapter *Emission Inventory*
5. Leendert Fung, Lead Consultant Chapters *National Circumstances* and *Linkages with Other Conventions*
6. A. Sheikharim, Lead Consultant Chapters *Emission Abatement*
7. Dirk Noordam, Consultant Chapter *Vulnerability and Adaptation*
8. Maureen Playfair, Consultant Chapters *Emission Inventory* and *Emission Abatement*
9. Armand Amatali, Consultant Chapter *Vulnerability and Adaptation*
10. Gerrit Breinburg, Consultant Chapter *Emission Abatement*

Annex 2

Questionnaire Assessment of the Climate Change Activities after INC (translated from the original Dutch version)

- What is the climate policy of the Government?
- Which actors are involved in the climate policy?
- Which activities have been implemented under the INC?
- Which activities are currently in general being implemented within the scope of climate change?
- What are the planned activities?
- Which activities have been implemented under the other conventions? UNCCD, UNCBD, National Climate Change Self Assessment
- Which activities is the University implementing?
- Which activities is the Ministry of Public Works implementing within the scope of Climate Change?

Annex 3

Questionnaire Assessment of the Work Carried Out under INC (translated from the original Dutch version)

General

1. Name interviewee:
Role in INC:
Subject:

The INC process

2.
 - a. Were the subjects (chapters) relevant for Suriname?
Which subjects should be considered or should be priority in the SNC?
 - b. Which expertise/disciplines were involved in the formulation of your chapter? Which expertise should be included?
 - c. Data gathering:
What were the strengths and weaknesses?
 - d. Which information/issues should be updated in your chapter, after the INC was completed?
 - e. Lessons Learned:
Which experience(s) have you gained during the formulation of the INC? Both technical and process driven dimensions.

APPENDIX E: LETTERS OF ENDORSEMENT

- GEF Operational Focal Point
Attached

- UNFCCC Focal Point
Attached

United Nations Development Programme
Country: SURINAME

Project Document

Project Title

Enabling Activities for the preparation of Suriname[‘s Second National Communication to the United Nations Framework Convention on Climate Change

UNDAF Outcome(s):

By 2011, pro-poor policies are in place to ensure that vulnerable groups in society benefit from growth and have equitable access to opportunities, assets and resources; which corresponds to the National Priority Area of: fair distribution of wealth and equal opportunities for all.

Expected CP Outcome(s):

(Those linked to the project and extracted from the CPAP)

Outcome 1.4.: A sustainable natural resources planning and management system is in place.

Expected Output(s):

(Those that will result from the project and extracted from the CPAP)

Responsible organizations have the capacity to: design, implement and monitor systems for the management, sustainable use and conservation of biodiversity; to implement measures on the adaptation and mitigation of the effects of climate change.

Implementing Partner:

Ministry of PLOS

Responsible Parties:

Brief Description

This project will enable Suriname to prepare its Second National Communication to the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). The findings and recommendations of the 2007 National Capacity Self-Assessment and Climate Change Self-Assessment exercises, as well as recommendations from consultation workshops will be included. Main components are: (a) an inventory of the greenhouse gases for the years 1996 and 2003 utilizing the IPCC guidelines; (b) vulnerability assessments of the impacts of climate change and adaptation measures in general and, in particular for certain developments and environment sectors in Suriname not addressed in the first exercise; (c) research to improve the quality of information in some specific inventory sectors such as Energy and Land Use Change and Forests; and (d) preparation of the Second National Communication of Suriname to the Conference of the Parties.

During the implementation of the project, climate change information to general public will be improved.

Crosscutting issues will be addressed to foster the effort Conventions to Combat Desertification and on Biological to implement the Convention will have been gained at the

2009 -2011 AWP budget:	_____
Total resources required	405,000__
Total allocated resources:	405,000
• Regular	_____
• Other:	
○ GEF	405,000
○ Government	_____
Unfunded budget:	_____
In-kind Contributions	_____

Start date:	1 August 2009
End Date	31 July 2011
PAC Meeting Date	_____
Management Arrangement	NEX

Agreed by (Government):

Agreed by (Implementing Partner):

Agreed by (Other Implementing Partner):

Agreed by UNDP:

Signature Page

Country: **Suriname**

UNDAF Outcome 1: By 2011, pro-poor policies are in place to ensure that vulnerable groups in society benefit from growth and have equitable access to opportunities, assets, resources and decent work.

CP Outcome 1.4.: A sustainable and participatory natural resources planning and management system is in place

CP Outcome Indicator: A mechanism for sustainable land management and monitoring is established

Expected Output(s): CP Output 1.4.3: Responsible organizations have the capacity to: design, implement and monitor systems for the management, sustainable use and conservation of biodiversity; to implement measures on the adaptation and mitigation of the effects of climate change.

Implementing partner (designated institution/Executing agency):

Ministry of Planning and Development Cooperation

Other Implementing Partner: Ministry of Labour, Technological Development and Environment

Programme Period:	2007-2011
Programme Component:	Energy and Environment
Project Title:	PIMS #3537 Enabling Activities for the preparation of Suriname's Second National Communication to the United Framework Convention on Climate Change
Project ID:	
Project Duration:	3 years
Management Arrangement:	National Execution

Budget	USD 405,000
General Management Support Fee	USD
Total budget:	USD 405,000
Allocated resources:	
• Government	USD
• Regular	USD
• Other: GEF	USD 405,000
• In kind contributions	USD

Agreed by Government of Suriname:		Date
Dr. Ricardo van Ravenswaay; Minister of Planning and Development Cooperation		
Agreed by Implementing partner:		Date
Dr. Ricardo van Ravenswaay; Minister of Planning and Development Cooperation		
Agreed by Other Implementing partner:		Date
Drs. J. Amarello-Williams; Minister of Labour, Technological Development and Environment		
Agreed by UNDP:		Date
Dr. Marcia de Castro; UNDP Resident Representative		