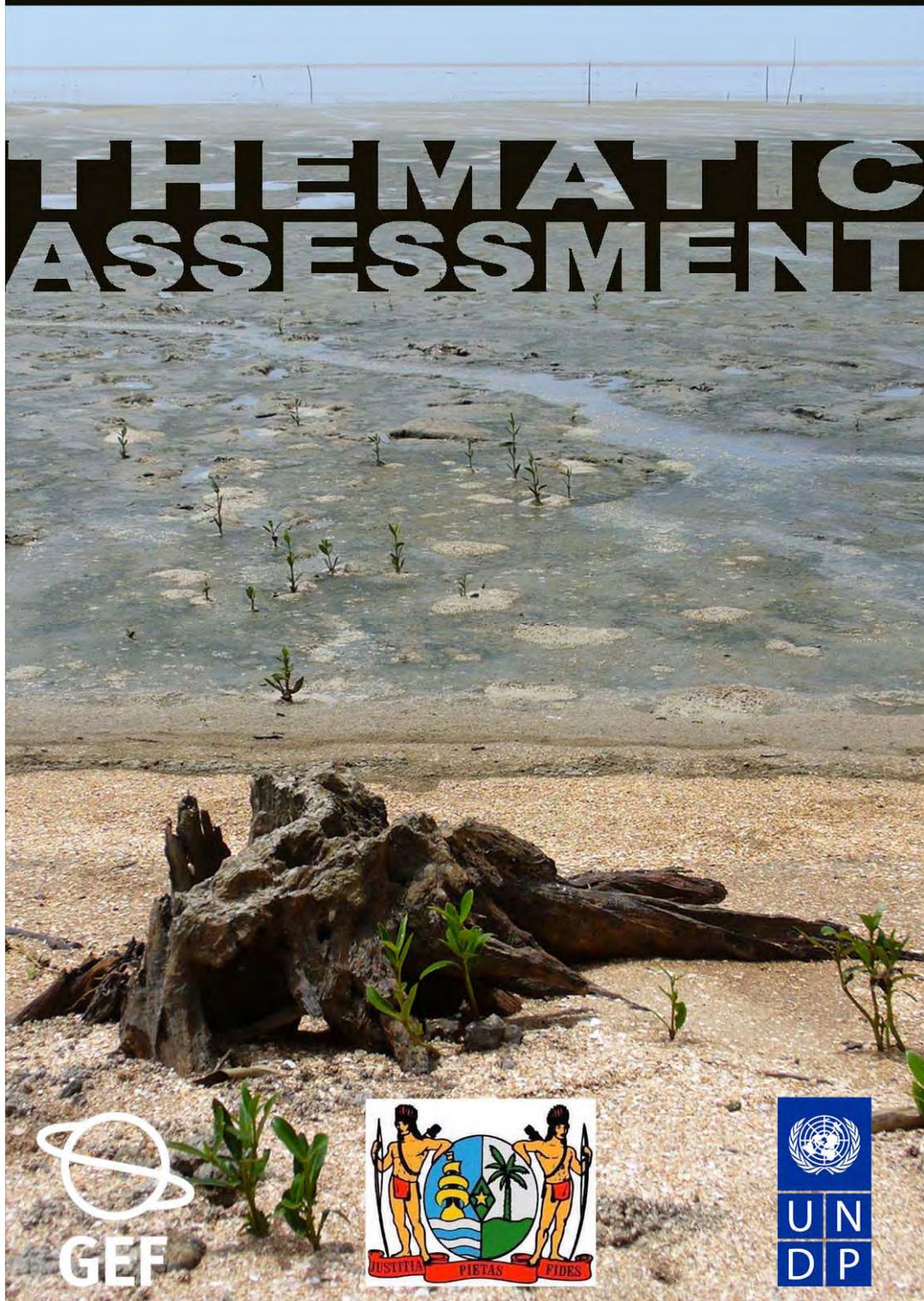


National Capacity Self-Assessment  
in relation to the  
**United Nations Framework Convention  
on Climate Change  
(UNFCCC)**

# THEMATIC ASSESSMENT



Prepared for the Ministry of Labour, Technological  
Development and Environment in Suriname

Sietze van Dijk & Rutger de Wolf, ESS  
August 2008

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United Nations Framework Convention on Climate Change  
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**Prepared for the Ministry of Labour,  
Technological Development and Environment**



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The views expressed in this publication are those of the author(s) and do not necessarily represent those of the United Nations, including UNDP, or their Member States.



## Table of Contents

<b>Acronyms.....</b>	<b>4</b>
<b>Executive Summary .....</b>	<b>6</b>
<b>1 Introduction to the Convention Thematic Area.....</b>	<b>9</b>
<b>2 Methodology.....</b>	<b>12</b>
2.1 Completion of Stocktaking.....	12
2.2 Thematic Assessment.....	13
2.3 Validation.....	13
<b>3 Suriname and its Relation to the UNFCCC.....</b>	<b>14</b>
3.1 Background Information .....	14
3.2 Policy and Legal Background.....	15
3.3 Institutional Arrangements.....	16
3.4 Stakeholders .....	18
<b>4 UNFCCC Thematic Assessment.....</b>	<b>21</b>
4.1 Convention Commitments Review .....	21
4.1.1 Current situation towards environmental and capacity issues.....	22
4.1.2 Cross-cutting linkages among thematic areas.....	29
4.1.3 Gaps .....	29
4.2 Identification of Key Issues and Prioritization .....	30
4.3 Capacity Constraints of Priority Issues.....	31
4.4 Gap Analysis Conclusions.....	32
<b>5 General Conclusions and Recommendations .....</b>	<b>33</b>
<b>Annex I Stocktaking Stakeholders List.....</b>	<b>35</b>
<b>Annex II Convention Commitments and Marrakech Accords.....</b>	<b>36</b>
<b>Annex III Presentation at Validation Workshop .....</b>	<b>38</b>

## Acronyms

Acronym	Dutch	English
ABS	Algemeen Bureau voor Statistiek	General Bureau of statistics
AdeKUS	Anton de Kom Universiteit van Suriname	Anton de Kom University of Suriname
ASFA	Associatie van Surinaamse Fabrikanten	Association of Surinamese Factories
ATM	Ministerie van Arbeid, Technologische Ontwikkeling en Milieu	Ministry of Labour, Technological Development and Environment
BUZA	Ministerie van Buitenlandse Zaken	Ministry of Foreign Affairs
CD4CDM		Capacity Building for CDM project
CDM		Clean Development Mechanism
COP		Conference of Parties
DMGPA	Masterplan Ontwatering Groot-Paramaribo	Drainage Masterplan Greater-Paramaribo Area
E(S)IA		Environmental (& Social) Impact Assessment
EBS	Energiebedrijven Suriname	Energy Company Suriname
GEF		Global Environment Facility
GHG	Broeikasgas	Greenhouse Gas
GLIS	Grondregistratie en Landinformatie Systeem	Land Registration and Information System
GoS	Overheid van Suriname	Government of Suriname
HFLD		High Forested Low Deforestation
ICZM		Integrated Coastal Zone Management
IDB		Inter-American Development Bank
IPCC		International Panel on Climate Change
KAP	Klimaat Actie Plan	Climate Change Action Plan
LBB	's Lands Bosbeheer	(former) Forest Service
LVV	Ministerie van Landbouw, Veeteelt en Visserij	Ministry of Agriculture, Animal Husbandry and Fisheries
MAS	Maritieme Autoriteit Suriname	Maritime Authority Suriname
MDS	Meteorologische Dienst van Suriname	Meteorological Service Suriname
MEA		Multilateral Environmental Agreements
MOP	Meerjaren Ontwikkelings Plan	Multi-annual National Development Plan
NB	Natuurbeheer	Nature Conservation Division
NCAP		Netherlands Climate Assistance Programme
NCCR	Nationaal Coördinatie Centrum voor Rampenbestrijding	National Coordination Centre for Emergency
NCSA		National Capacity Self-Assessment
NGO		Non-governmental Organisation

<b>Acronym</b>	<b>Dutch</b>	<b>English</b>
NH	Ministerie van Natuurlijke Hulpbronnen	Ministry of Natural Resources
NIMOS	Nationaal Instituut voor Milieu en Ontwikkeling in Suriname	National Institute for Environment and Development in Suriname
NMR	Nationale Milieu Raad	National Council for the Environment
OECD		Organisation for Economic Cooperation and Development
OW	Ministerie van Openbare Werken	Ministry of Public Works
PHS	Platform Houtsector Suriname	Timber Business Association
PLOS	Ministerie van Planning en Ontwikkelings Samenwerking	Ministry of Planning and Development Cooperation
REDD		Reduced Emissions from Deforestation and Degradation
ROGB	Ministerie van Ruimtelijke Ordening, Grond- en Bosbeheer	Ministry of Physical Planning, Land and Forest Management
SAHO	Stichting Atmosferisch en Hydrologisch onderzoek	Foundation for Atmospheric and Hydrological Research
SBB	Stichting Bosbeheer en Bostoezicht	Foundation for Forest Management and Production Control
SC		Steering Committee
SPS	Stichting Planbureau Suriname	Foundation National Planning Office
STINASU	Stichting Natuurbehoud Suriname	Foundation for Nature Conservation in Suriname
SWM	Surinaamse Waterleiding Maatschappij	Suriname Water Company
TCT	Ministerie van Transport, Communicatie en Toerisme	Ministry of Transport, Communication and Tourism
UNCBD		United Nations Convention on Biological Diversity
UNCCD		United Nations Convention to Combat Desertification
UNCED		United Nations Conference on Environment and Development
UNDP		United Nations Development Programme
UNFCCC		United Nations Framework Convention on Climate Change
UNFF		United Nations Forum on Forests
VSB	Vereniging Surinaams Bedrijfsleven	Business Association
WLA	Waterloopkundige Afdeling van OW	Hydraulic Research Division of OW

## Executive Summary

The United Nations Framework Convention on Climate Change (UNFCCC) has two main areas of concern: i) reducing greenhouse gas (GHG) emissions from human activities, and ii) assessing the direct effects of GHG on climate change and developing adaptations to cope with or to decrease these effects. Currently, conservation of and payments for existing carbon sinks (especially forests) receive higher attention too. Suriname is categorised as a developing country (non-annex country) and ratified the UNFCCC convention in 1997 and the Kyoto Protocol in 2006. This report analyses the country's obligations and opportunities related to the convention and the country's performance and achievements to date. It includes strengths and constraints in implementing the convention requirements as well as priority capacity needs for doing so.

The UNFCCC thematic assessment methodology is based on the GEF Guidelines for conducting a NCSA and the NCSA Recourse Kit. By reviewing existing documents and additional interviews, the prior step of stocktaking is now completed (stakeholders list and relevant institutions and documents) and the thematic assessment is conducted, analysing capacity building issues, needs and opportunities at an individual, institutional and systemic level. The results were validated during a workshop held with the thematic Steering Committees and representatives of ATM.

The economic zone of Suriname is located in the flat and low located coastal areas. Any rise of sea level (resulting in flooding and intrusion of salt) will therefore have disastrous consequences for the entire nation, since the largest concentration of people is living in this coastal region. In addition, climate change is likely to result in changes in the hydrological cycle, including a change in intensity and distribution of rainfall and droughts. This makes Suriname vulnerable to climate change, and urges for adaptation measures to cope with climate change and sea level rise. GHG emissions are relatively low, as Suriname is only limitedly industrialised and has a rather small agricultural sector.

Relevant laws related to the implementation of the UNFCCC commitments are the Nature Preservation Act, National Planning Act, Forest Management Act and the Government Decree on Nature Protection, establishing the Central Suriname Nature Reserve. An Environmental Framework Act is under construction regulating pollution, waste management and environmental impact. Relevant policies concern the Drainage Master plan Greater-Paramaribo Area, the National Forest Policy, the Multi-annual National Development Plan (MOP) for 2006-2011, the policy of the Ministry of Public Works 2006-2011 and the policy of the Ministry of Labour, Technological Development and Environment (ATM). No strategy or action plan is approved yet, although a Climate Action Plan for the coastal area is expected to be approved in the very near future. A Strategic Action Plan for the Forest Sector is under development, focussing partly on conservation of forests and payments for ecosystem services. Plans and actions in Suriname mainly focus on measures for adaptation, as climate change and sea level rise will initially affect the coastal (and economic) zone of Suriname. National policies and the supporting legal framework furthermore concentrate on actions related to forests, water and physical planning.

The ministry of ATM serves as the focal point and is responsible for the implementation of the UNFCCC. ATM mandated the National Institute for Environment and Development in Suriname (NIMOS) for the implementation of some of its associated actions. The National Council for the Environment (NMR) supports the GoS on its national environmental policy and serves as an advisory body for the ministry of ATM. Several other relevant ministries and semi-government organisations are the Ministry of Physical Planning, Land and Forest Management (ROGB), the Ministry of Planning and Development Cooperation (PLOS), the National Planning Office (SPS), the Ministry of Natural Resources (NH), the Ministry of Agriculture, Animal Husbandry and Fisheries (LVV) and the Ministry of Public Works (OW). A National Climate Change Steering Committee, consisting of representatives from relevant sectors, is responsible for guidance, monitoring and evaluation of climate change related projects and programmes.

With regard to the UNFCCC requirements the GoS participated in two Netherlands Climate Assistance Programmes (NCAP I and II), published its First National Communication, implemented a Climate Change Awareness Programme and now participates in the Capacity Development for CDM Project (CD4CDM). The GoS ratified the Kyoto Protocol in December 2006. In the near future it will complete and approve the Climate Action Plan (KAP) for its coastal area, prepare a KAP for the interior, submit a project document for the Second National Communication and develop its Integrated Coastal Zone Management Plan.

The UNFCCC thematic assessment identifies several gaps in meeting the convention's requirements:

- At a policy making level: policy makers, due to the limited resources and facilities are lacking the necessary knowledge, tools and scope, capacity building is required;
- Implementing institutions: due to limiting facilities and financial resources, implementing agencies are missing operational power;
- Data networks: lack technicians, skilled fieldworkers and appropriate instruments and techniques for adequate data collection (e.g. on the coastal region with respect to climate change and its (potential) effects);
- Information networks: exchange of information and database access show large deficiencies; this knowledge base needs to be strengthened;
- Dialogue networks: these hardly exist, interaction between different portals needs to be strengthened and international knowledge sharing and cooperation needs to be promoted.

The main focus of Suriname is and should be on adaptation, therefore key issues are:

- Water – coastal erosion and flooding, rainfall and run-off, and data availability;
- Physical planning – allocation of protected areas and multiple use areas, and urban infrastructure in coastal region;
- Forests – conservation, sustainable use and payments for ecosystem services.

Proper physical planning is important, integrating sound land use planning and the wise utilisation of ecosystem services. This creates a basis for international support to cover capacity needs. The GoS should create the necessary enabling environment (systemic level) in its political arena.

Capacity constraints are identified at different levels. At the individual level the GoS has only limited (insufficient) human capital at higher policy and technical level. At institutional level responsibilities among institutes are scattered, cross-sector cooperation is lacking and some supporting and controlling agencies are not in place. Furthermore, financial and instrumental means are often lacking. At systemic level the GoS shows insufficient scope concerning the integration of main issues. Land rights (of Indigenous and Marroon communities) are still unsolved.

The issues of climate change and its (potential) effects for Suriname is still a quite new topic, and capacity to adapt to climate change and implement appropriate mitigation measures is still in development. Most of the responsible agencies lack sufficient experts and/or expertise to develop proper legislation, policies and programmes, and to incorporate climate change issues in existing structures and processes. Some supporting agencies are not yet in place, and are expected to have only limited possibilities to attract specific expertise for effective and appropriate regulations and implementation. These capacity constraints urge for creative solutions to strengthen existing capacity at an individual and institutional level, join activities among the different MEA's requirements and work as much as possible along existing structures and processes.

Suriname faces the challenge to meet the conventions' requirements by adapting a realistic and feasible strategy. Due to the limited number of experts such a strategy should cluster 'fields of intervention', distinguish between 'hype' and 'trend', create synergy between the three conventions' capacity building, prioritise the conventions' requirements and related actions and give way to cross-cutting issues and capacity needs.

# 1 Introduction to the Convention Thematic Area

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty resulting from the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992. The treaty aims at “stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (UNFCCC article 2). In short the Convention and its subsequent Conferences of Parties (COP’s) have two main areas of concern:

1. Reducing greenhouse gas (GHG) emissions from human activities, e.g. through developing and promoting energy-saving measures and the protection of carbon sinks (forests, peat areas, etc.);
2. Assessing the direct effects of GHG on climate change (increase of temperature, sea level rise, dryer/wetter seasons, intensification of UV radiation, etc.) and developing adaptations to cope with or to decrease these effects.

The UNFCCC treaty as originally framed, did not set any mandatory limits on GHG emissions for individual nations and contained no enforcement provisions yet. Rather, the treaty included provisions for updates (called ‘protocols’) that would set mandatory emission limits. The principal update of the UNFCCC is the Kyoto Protocol which was adopted by COP-3, in 1997 in Kyoto, Japan. Most industrialized nations and some central European economies in transition agreed to legally binding reductions in GHG emissions of at least 5% below the 1990 levels (reference baseline) between the years 2008-2012.

Initially most attention was towards the reduction of carbon emissions and adaptation measures due to (expected) climate change effects. Recently, attention at international level also focus on the conservation of existing carbon sinks (especially in forests) and mechanisms of ‘payments’ for these sinks. During the last COP in Bali (Indonesia - 2007) a programme was adopted, known as Reduced Emissions from Deforestation and Degradation (REDD<sup>1</sup>), which is now widely seen by scientists and environmentalists as a way to address environmental degradation by assigning value to intact ecosystems like rainforests and peat swamps. However, too little incentives do exist yet within the programme for the protection of existing forests. Currently the United Nations Forum on Forests (UNFF) started several initiatives to develop potential financial mechanisms for sustainable forest management and forest protection. One of these mechanisms deals with the payment for ecosystem services (PES), arranging a financial compensation for forest users, managers and/or protectors for the services that these forests provide (clean air, drinking water, protection against erosion, leisure possibilities etc.).

Signatories to the UNFCCC are separated in three groups:

- **Annex I countries** (industrialized countries) - agreed to reduce their GHG emissions (particularly carbon dioxide) to target levels below the 1990 emissions levels. If they cannot do so, they must buy emission credits or invest in conservation;

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<sup>1</sup> Although REDD was initially spelled as ‘Reducing Emissions from Deforestation in Developing Countries’, it is now referred to as ‘Reducing Emissions from Deforestation and Degradation’.

- **Annex II countries** (developed countries) - this is a sub-group of the annex I countries consisting of the majority of the OECD<sup>2</sup> members and have to provide financial resources for the developing countries;
- **Non-annex countries, which are the developing countries** - have no immediate restrictions under the UNFCCC. This serves three purposes: 1) allows for development and associated emissions to industrial growth, and developing economies can potentially grow very fast, 2) it means that they cannot sell emissions credits to industrialised nations to permit those nations to over-pollute, and 3) they may receive resources and technologies from the Annex II countries.

The republic of Suriname is currently categorised as a developing country (non-annex country) and ratified the UNFCCC convention in 1997. The Kyoto Protocol was ratified by Suriname in 2006. The ministry of ATM serves as the focal point and is responsible for the implementation of the convention. ATM mandated NIMOS for the implementation of some of its associated actions. Until recently a representative of NIMOS was established as the national climate change focal point. Currently the appointment of a new representative as focal point is in process.

Plans and actions in Suriname are mainly focussing on adaptation, less on emission reduction, as climate change and sea level rise initially will negatively affect wildlife habitat, agriculture, fisheries and general environmental conditions (e.g. health) in the economic (coastal) zone of Suriname. Furthermore, as a non-annex country, Suriname has no immediate restrictions with regards to emissions.

During the COP-7 meeting in Marrakech, Morocco (2001) operational details were finalized and several capacity building needs of developing countries to comply with the convention commitments were identified. This whole package of decisions is known as the Marrakech Accords. Based on the capacity building needs listed in the Marrakech Accords, a guideline was prepared by the Global Environment Facility for self-assessment of the countries' capacity needs for global environmental management (GEF 2001<sup>3</sup>), which was further elaborated by the United Nations Development Programme, resulting in a Resource Kit for National Capacity Self-Assessment (UNDP 2005<sup>4</sup>). These guidelines are prepared to assist countries to focus on capacity needs, introduce approaches and tools to conduct effective and efficient capacity assessments and to provide guidance on GEF requirements for National Capacity Self-Assessments (NCSA's).

The primary goal of the NCSA is to determine national priorities for capacity development to better address global environmental issues. Through a NCSA the country's capacity strengths, constraints and needs are analysed, and capacity development actions to address those, are recommended. The focus of the NCSA is on the country's capacity requirements to implement the three "Rio Conventions" - biodiversity (UNCBD), land degradation (UNCCD), and climate change (UNFCCC) - and other relevant Multilateral Environmental Agreements (MEA's) (GEF 2005).

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<sup>2</sup> Organisation for Economic Cooperation and Development; countries that had transition economies in 1992 are not on the Annex II list.

<sup>3</sup> Global Environment Facility (GEF), 2001. Guide for self-assessment of country capacity needs for global environmental management.

<sup>4</sup> United Nations Development Programme (UNDP), 2005. Resource Kit for National Capacity Self-Assessment.

This present report focuses on the thematic assessment of Suriname in relation to the climate change convention (UNFCCC). The main objective of the assessment is to analyse the country's obligations and opportunities related to the convention and the country's performance and achievements to date. It includes strengths and constraints in implementing the convention requirements as well as priority capacity needs for doing so.

The assessment will be the basis for the next step in which cross-cutting capacity issues will be identified, fostering synergies among the MEA's. Next, a Capacity Action Plan (other than the Climate Action Plan) will be drawn, based on the assessment of priority thematic and cross-cutting capacity needs, resulting in a programme of capacity development actions.

Methods used for the assessment are described in chapter 2. Chapter 3 discusses the general and legislative backgrounds of Suriname with regards to the implementation of the convention and gives an analysis of institutional arrangements and involved stakeholders. Chapter 4 deals with the actual thematic assessment, analysing the convention's requirements for Suriname, identifying gaps and priorities and discussing capacity constraints. In chapter 5 several general conclusions and recommendation are drawn from the previous chapters.

## 2 Methodology

This chapter describes the methodology used to conduct the Thematic Assessment, based on the Guidelines for conducting a NCSA (GEF 2001) and the NCSA Recourse Kit (GEF 2005), adapted to fit the requirements of the Suriname NCSA project. The NCSA Recourse Kit suggests a 5-step approach to implement the National Capacity Self-Assessment. The first 2 steps, Inception and Stocktaking, precede the Thematic Assessments which is step 3, the main topic of this present study. Before starting this third step it was agreed to have a closer look into the completeness of part of the Stocktaking: completing the list of stakeholders and their institutional relation to the convention.

### 2.1 Completion of Stocktaking

In May 2007 a national workshop was held, aiming to identify relevant stakeholders with regard to the national implementation of the UNFCCC. The exercise yielded an initial list of institutions and individuals with a specific stake in the convention (see Annex I for this initial list). Based on this first inventory, the list of stakeholders is now further completed and all identified stakeholders are categorised according to their relation to the conventions' implementation as proposed in the NCSA Guidelines (GEF 2001):

1. **Mandated** ministries and/or institutions with a clearly described responsibility in the implementation of the conventions' requirements;
2. Ministries, institutions and/or individuals with clearly described **tasks** in the national implementation of the convention;
3. Ministries, institutions and individuals **effected** by the implementation.

Next, an inventory of Suriname's obligations towards the convention is conducted. This inventory includes the following sources:

- National legislation;
- National policies;
- Policies and programme documents of semi-government institutions;
- Policies and programmes of private sector organisations and NGO's.

Finally, to complete this stocktaking exercise, a comparison is made between the identified responsibilities and tasks (stakeholders in group 1 and 2) and the national requirements of the UNFCCC. This matrix firstly results in a clear overview of Suriname's present position towards implementing UNFCCC and, secondly, it creates opportunity to compare with similar matrices for the conventions on biodiversity and land degradation.

Comparing the matrices yields a list of stakeholders (group 1 and 2) with a clearly defined stake in 1, 2 or even 3 of the conventions. Based on this list the interviews are planned and likewise done by 1, 2 or even 3 of the consultants, thus avoiding overlapping appointments and interviews. The interviews i) gained confirmation on the institutions role related to the convention(s) and ii) created clear insight in capacity related constraints of the organisation. These constraints are on the individual, organisational and/or system level (enabling environment). Finally,

capacity constraints (needs) and opportunities for capacity development are identified and further analysed in the Thematic Assessment for each of the three conventions.

## **2.2 Thematic Assessment**

Similar to the Stocktaking, the Thematic Assessment differentiates between the three conventions. Elaboration of each assessment includes the review of available information from existing documents, strategies, past and ongoing programmes and projects of each of the conventions. Each Thematic Assessment addresses an analysis on capacity building issues, needs and opportunities on environmental issues at all three levels of capacity: individual, institutional and the enabling environment.

Similar to the completion of the stocktaking, capacity development constraints and opportunities may ultimately show some cross-cutting (overlapping) components. These mutual opportunities for capacity development are summarised during the final stage of this study where all results of the three Thematic Assessments come together again.

## **2.3 Validation**

To validate the results of the (three) draft reports on the Thematic Assessments, discussions with the thematic Steering Committees (SC) are held. For this assessment it was done for representatives of the Climate Change Steering Committee and representatives of ATM. The SC is assumed to be a good representation of all stakeholders as identified in the earlier mentioned three categories.

### 3 Suriname and its Relation to the UNFCCC

#### 3.1 Background Information

Suriname is located at the north-east coast of Latin America and has a coastal length of approximately 386 km. The total land surface is about 164.000 km<sup>2</sup> of which over 90% is covered with tropical rainforests. Suriname has a population of approximately 476.000 inhabitants (July 2008 estimate). About 70% of its population is living in and around the capital Paramaribo and some smaller towns and villages in the coastal plains. Another 25% is living in rural areas in the coastal zone, while the remaining part is living in small villages spread over the immense interior.

Suriname's richness in natural resources is mainly extracted from the coastal plains and the so-called forestry belt through mining, agriculture, fishery and forestry, which is therefore the main economic zone of the country. Due to the flat and low location of the Suriname coast, any rise of sea level will have its immediate impact on the nations livelihoods, human settlements and nature, because of potential flooding and intrusion of salt. Although studies and predictions are sometimes contradicting, it is documented that a sea level rise of 20-60 cm over the coming 100 years, as reported by IPCC (IPCC Fourth Assessment Report, 2007), will have disastrous consequences for the entire nation, since the largest concentration of people is living in the coastal region. Major national economies will be severely impacted, as it would result in increased erosion, large-scale inundation, loss of fertile land and freshwater resources, decline of biodiversity, and worsening of human health.



In addition, climate change is likely to result in changes in the hydrological cycle, including a change in intensity and distribution of rainfall and droughts: rainfall is expected to intensify, while droughts will become more common. The combined effect of these makes Suriname and especially the coastal area vulnerable to climate change. There is a great need for adaptation measures to cope with climate change and sea level rise.

Suriname itself has relatively low green house gas (GHG) emissions<sup>5</sup>, as it is only limitedly industrialised, sometimes even referred to as 'carbon neutral'. Except for the bauxite sector and petroleum industry, there are no large scale industries, which can

<sup>5</sup> Carbon emissions per capita however is relatively high, which was partly the result of the powerplant at Paranam. This plant however has been closed and it is expected that emissions at national level have dropped. Recent data on emission are not available.

be regarded as serious energy consumers. The agricultural sector furthermore is too small and too limited to be regarded as a player of significance regarding emission of green house gases. Several inventories were carried out in the past decade: the first in 1994 during The Netherlands Climate Change Assistance Programme (NCAP), the second and third in 1998 and 2003 under the project "Enabling Suriname to prepare its National Communication in response to its commitment to the UNFCCC" (NIMOS 2005<sup>6</sup>). A new inventory will be carried out in the near future (UNDP s.a.<sup>7</sup>). The last inventory (2003) showed that carbon dioxide accounts for most of the GHG emissions in Suriname (NIMOS 2005). The total GHG emission equals to 8,902 Gg of CO<sub>2</sub> equivalent, contributed for a large part (71%) by the energy sector, followed by land-use change, forestry and agriculture. The Surinamese forests however constitute a sink of significant amount, about 3,862 Gg of CO<sub>2</sub> equivalents annually, making the net GHG emission equal to 5,040 Gg of CO<sub>2</sub> equivalents.

### **3.2 Policy and Legal Background**

The Constitution of the Republic of Suriname (1987) provides the legal basis for a sustainable environmental policy in its Article 6g: "The social objective of the State is focused towards the establishment and stimulation of conditions required for the preservation of nature and the safeguarding of the ecological balance." Adherence to these principles is witnessed through participation in the major environmental conventions. To address the climate change issues in general and the UNFCCC commitments in specific, some legislation, policy documents, and action programmes can be mentioned.

#### **Legislation:**

- Nature Preservation Act (1954), putting in place arrangements for the protection and maintenance of nature monuments;
- National Planning Act (1973), providing provisions for national and regional planning, e.g. land-use policy issues;
- Forest Management Act (1992), providing a framework for forest management, and sustainable utilization of the forest resources;
- Government Decree on Nature Protection (1998), establishing the Central Suriname Nature Reserve.

Most legislation was already developed before the ratification of the UNFCCC and therefore does not specifically address climate change issues and commitments to the UNFCCC. However, currently an Environmental Framework Act is under construction that will regulate amongst others pollution, waste management and environmental impact. Other existing laws do provide a basis for the protection of carbon stocks and regulate land use planning and sustainable management of the natural resources.

#### **Policies:**

- Drainage Master plan Greater-Paramaribo Area (2001);

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<sup>6</sup> National Institute for Environment and Development in Suriname (NIMOS), 2005. First National Communication to the United Nations Framework Convention on Climate Change.

<sup>7</sup> United Nations Development Programme (UNDP), s.a. (in development). Enabling Activities for the Preparation of Suriname's Second National Communication to the UNFCCC.

- National Forest Policy (2003);
- Multi-annual National Development Plan (MOP) for 2006-2011;
- Policy of Ministry of Public Works 2006-2011 (2006);
- Policy of Ministry of Labour, Technological Development and Environment (2007).

The government's development policy is based on an integrated approach towards economic, social and environmental sustainability.

**Action plans and programmes:**

Considering related action plans, recently no action plan is formally approved by the Government of Suriname (GoS), and no Climate Change Strategy has been developed yet. In 2004 an Environmental Sector Analysis and Action Programme for the Non-Urban Environment was elaborated. Although not formally approved, it reflects the situation and needs regarding environmental issues in the non-urban areas.

Some more action plans however are currently being developed. First, the Climate Action Plan (KAP) will focus on mitigation and adaptation measures to cope with the (expected) effects of climate change, and stresses the importance of integrated coastal zone management and spatial planning. Next, a Strategic Action Plan for the Forest Sector is under development, focussing on the role of forests to the national economy and the well-being of current and future generations with due respect for the conservation of the biodiversity. Specific objectives e.g. regard the physical and financial contribution of forest services to the national economy, by realising a monetary value of ecological functions (PES), preservation of biodiversity and essential environmental functions by the expansion and sustainable management of the protected areas network.

Ongoing and planned developments in sectors like mining, forestry, agriculture and waste management may result in increased emissions, creating significant pressure on the GoS to develop policies towards adaptation and mitigation (NIMOS 2005<sup>8</sup>). On the other hand sustainable forestry practices were stimulated and introduced in the last decade, having a positive effect on GHG emissions from forestry practices. Concrete policy and legislation on emission trade and mitigation of GHG emissions are still to be developed.

Summarizing, it may be concluded that national policies and the supporting legal framework for mitigation of emissions and adaptation to the effects of climate change, concentrate on actions related to *forests, water and physical planning*.

### **3.3 Institutional Arrangements**

The environmental department of 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

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<sup>8</sup> National Institute for Environment and Development in Suriname (NIMOS), 2005. First National Communication to the United Nations Framework Convention on Climate Change.

these policies, including the implementation of the major conventions: UNCCD, UNFCCC and UNCBD. This is done in collaboration with governmental and non-governmental bodies and institutions. The National Council for the Environment (NMR) supports the GoS on its national environmental policy and serves as an advisory body for the ministry of ATM. The National Institute for Environment and Development in Suriname (NIMOS) functions as the technical arm of the Ministry of ATM. NIMOS is responsible for: i) initiating and realising national legal instruments; ii) preparing and realizing measures with regard to the protection of the environment; iii) coordinating and controlling the fulfilment of these measures including reviewing and monitoring of Environmental (& Social) Impact Assessments (E(S)IA's), and gathering and dissemination of relevant data on land use and management.

There are several other ministries and semi-government organisations functioning as key agencies with specific global environmental management mandates relevant to the UNFCCC implementation. Their role will become more clear in the following paragraphs and chapters.

- The Ministry of Physical Planning, Land and Forest Management (ROGB) is responsible for the formulation of the national policy on land use planning, sustainable forest use and nature conservation, and has several sub-divisions responsible for the regulation, implementation, monitoring and control.
- The Ministry of Planning and Development Cooperation (PLOS) has a National Planning Office (SPS) in charge of preparing the Multi-annual National Development Plans (MOPs). It has a sub-directorate Environment and Spatial Planning that is responsible for the coordination of physical planning in Suriname. It updates an inventory of data relating to land and soil, natural resources, existing infrastructure and land allocation. It also maps the structural characteristics of urban and rural areas and keeps record of geographic data in order to map the environment in terms of ecosystems as well as socio-demographic and physical indicators.
- The Ministry of Natural Resources (NH) provides control of the exploitation and management of minerals, water and energy and regulates domestic, public and commercial energy use.
- The Ministry of Agriculture, Animal Husbandry and Fisheries (LVV) regulates the agrarian production sector and the proper use of agricultural lands and waters.
- The Ministry of Public Works (OW) is responsible for planning and implementation of civil technical and infrastructural works, water management and drainage, hydrological and meteorological services, and waste management. The ministry developed a master plan on drainage of Paramaribo, incorporating climate change concerns and issues.

A National Climate Change Steering Committee was installed in 2004, consisting of representatives from different relevant sectors such as energy, industry, agriculture and forestry. Also the Meteorological Services and the Anton de Kom University of Suriname (AdeKUS) are represented. With this committee the GoS aims at effective coordination of climate change issues in Suriname in order to formulate a balanced climate policy with broad support. The Committee is responsible for guidance, monitoring and evaluation of climate change related projects and programmes (initiated by the GoS). Currently the formal status of the Steering Committee has expired, but a continuation of the Steering Committee is intended.

### 3.4 Stakeholders

During the stocktaking phase many stakeholders related to the UNFCCC were identified. Such a list could be extended by a large number of stakeholders, as climate change will effect the whole society. There is however a need to distinguish between responsibilities to the UNFCCC and vulnerability to climate change effects. For this reason, the list of stakeholders (of the first inventory) is further completed and all identified stakeholders are categorised according to their relation to the conventions' implementation as proposed in the NCSA Guidelines (GEF 2001):

1. Mandated ministries and/or institutions with a clearly described responsibility in the implementation of the conventions' requirements
2. Ministries, institutions and/or individuals with clearly described tasks in the national implementation of the convention
3. Ministries, institutions and individuals effected by the implementation.

These groups of stakeholders are presented in table 1, describing their relation to the convention and how their role is being implemented. As the third category could cover almost the whole society, it is decided to mention the stakeholders of the stocktaking list, added with just a little number of stakeholders.

**Table 1: Stakeholders to the implementation of the UNFCCC in Suriname**

WHO	WHAT	WHY	HOW
<i>Stakeholder name</i>	<i>Stakeholder interests, position and official mandate</i>	<i>Reasons for inclusion</i>	<i>(Possible) role in the implementation of the convention</i>
<b>Group 1: Mandated ministries and/or institutions with a clearly described responsibility in the implementation of the conventions' requirements</b>			
Ministry of Labour, Technological Development and Environment (ATM)	Responsible for formulation of environmental policy and implementation of ratified conventions	Core stakeholder, because of public mandate	Delegation, coordination, management and monitoring of activities
NIMOS	Awareness, developing KAP, technical assistance to ATM	Core stakeholder, because of specific implementing tasks regarding environmental issues	Regulating environmental impact, and implementation of specific activities
National Council for the Environment (NMR)	Advisory body to GoS	Public mandate	Advising implementing agencies

WHO	WHAT	WHY	HOW
<i>Stakeholder name</i>	<i>Stakeholder interests, position and official mandate</i>	<i>Reasons for inclusion</i>	<i>(Possible) role in the implementation of the convention</i>
<b>Group 2: Ministries, institutions and/or individuals with clearly described tasks in the national implementation of the convention</b>			
Ministry of Physical Planning, Land and Forest Management (ROGB)	Responsible for physical planning, land allocation, forest use and nature conservation	Core stakeholder in forest policy and spatial planning	Regulating forest use and land allocation
Ministry of Planning and Development Cooperation (PLOS)	Responsible for (e.g. environmental) project planning and management	Central stakeholder and project manager	Coordination and management of project activities
Planning Office (SPS)	Responsible for developing multi-annual development plans (MOP) and district plans	Specific tasks (planning)	Coordination of integrated planning, provision of related data
Ministry of Public Works (OW)	Responsible for collection and management of solid wastes, hydrological and meteorological services, and civil technical and infrastructural works	Important environmental management agency in public health related matters	Data provider and public awareness roles
Ministry of Natural Resources (NH)	Responsible for the use of mineral natural resources and water	Public mandate regarding exploitation of energy sources	Regulating generation and distribution of energy
Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)	Responsible for agricultural development	Agriculture sector and issues are critical to GHG emissions and mitigation issues, and vulnerable to climate change effects	Data provider, technical advisory and awareness roles
Meteorological Service (MDS)	Responsible for collection, analysis, and distribution of atmospheric information	Meteorological information central to all aspects of climate change	Data provider, technical advisory and awareness roles
Maritime Authority in Suriname (MAS)	International marine legislation and monitoring	Specific task regarding marine traffic	Data provider
Foundation for Forest Management and Production Control (SBB)	Responsible for sustainable forest management and production control	National forestry regulator	Protection and sustainable use of carbon storage in forests

WHO	WHAT	WHY	HOW
<i>Stakeholder name</i>	<i>Stakeholder interests, position and official mandate</i>	<i>Reasons for inclusion</i>	<i>(Possible) role in the implementation of the convention</i>
<b>Group 3: Ministries, institutions and individuals effected by the implementation</b>			
Ministry of Health	Responsible for management and delivery of health services	Health policy and management agency	Data provider, public awareness and participation in technical roles
Energy Company Suriname (EBS)	Sole public distributor of electricity, emission due to fossil fuel use	Vital to GHG emissions and mitigation measures	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
National Coordination Centre for Emergency (NCCR)	Responsible for disaster response coordination and management	Information source for climate risk and vulnerability and implementation role for adaptation	Data provider, public awareness and participation in project technical advisory roles
General Bureau of Statistics (ABS)	Provider of statistical data, archiving centre	Important in providing data	Data provider
STAATSOLIE	Crude oil producer	Growing potential in fossil fuel products	Data provider
Oil import companies (Sol, Texaco, Shell etc.)	Importer of aviation fuels and other petroleum products	Important distributor of petroleum products	Data provider
European delegation			Providing funds to cope with climate change effects
AdeKUS (including its research stations)	Research and education	Knowledge, expertise and equipment for inventories and (innovative) technological development	Data provider, public awareness and technical advisory roles
Land Registration and Information System (GLIS)	Responsible for land registration		
PHS	Timber business association		
VSB	Business association		
ASFA	Association of Surinamese factories		

## **4 UNFCCC Thematic Assessment**

### **4.1 Convention Commitments Review**

With regards to the UNFCCC the GoS has undertaken the following concrete activities in the light of the conventions requirements:

- Participation in the first Netherlands Climate Assistance Programme (NCAP I) during 1995-1996;
- Publication of the First National Communication in 2005;
- Climate Change Awareness Programme in 2003;
- Participation in the second Netherlands Climate Assistance Programme (NCAP II) during 2003-2008 (currently finishing);
- Participation in the Capacity Development for CDM Project (CD4CDM), 2007-ongoing.

The GoS moreover ratified the Kyoto Protocol in December 2006. In the near future it will undertake the following activities:

- Completing and approving the KAP for the coastal area;
- Preparing a KAP for the interior;
- Submitting the project document for the Second National Communication;
- Developing an Integrated Coastal Zone Management Plan.

The above mentioned activities are directly linked to convention commitments. Other activities, policies, programmes and incentives that are somehow in line with the convention requirements are mentioned in paragraph 4.1.1.

### 4.1.1 Current situation towards environmental and capacity issues

Currently, the GoS undertakes several initiatives to address the conventions requirements. To meet the conventions requirements, several capacity issues emerge that are related to the Marrakech Accords. These additional requirements are included in the list below. Resulted from interviews with stakeholders classified in group 1 and 2 (see 3.4), table 2 presents an overview of the UNFCCC requirements, Suriname's actions to meet those and the identified constraints, if any, in doing so.

**Table 2: Overview of National initiatives to address UNFCCC requirements**

<b>Requirement</b> <i>(convention and COP decisions)</i>	<b>National initiative to address</b> <i>(plans, strategies, activities)</i>	<b>Progress</b> <i>(how well the requirement is being addressed)</i>	<b>Constraints preventing compliance</b>
<b>UNFCCC CONVENTION REQUIREMENTS</b>			
<i>4.1(a) National greenhouse gases inventories of emissions by sources and removals by sinks</i>	Three inventories have been carried out (1994, 1998, 2003). Currently Suriname is applying for funds to establish the fourth inventory	Approximately each 5 year an inventory is carried out using the IPCC guidelines; expertise for implementing GHG inventories is available in Suriname	MDS and WLA do need more technical personnel and skilled workers at all levels and do have limited instruments for proper continual climate and hydraulic observations
<i>4.1(b) National (and regional) programmes to mitigate climate change and measures to adapt to climate change</i>	In 2001 a Drainage Masterplan Greater-Paramaribo Area (DMGPA) was developed by OW, incorporating sea level rise issue. The KAP is currently under development (with regards to the coastal areas) and in the near future an Integrated Coastal Zone Management Plan will be developed	The DMGPA functions as guideline for drainage activities in Greater-Paramaribo; the KAP is finalized but still needs to be approved by the GoS; other plans for mitigation and adaptation measures are not yet developed; progress in general is slow	Concerned institutions (e.g. Environmental Section of ATM, NIMOS, OW, LVV and Planning Office) lack sufficient human capacity and expertise to develop and implement plans and programmes

<b>Requirement</b> <i>(convention and COP decisions)</i>	<b>National initiative to address</b> <i>(plans, strategies, activities)</i>	<b>Progress</b> <i>(how well the requirement is being addressed)</i>	<b>Constraints preventing compliance</b>
<p>4.1(c) <i>Development, application and diffusion of technologies, practices and processes that control, reduce or prevent emissions in all relevant sectors</i></p>	<p>Legislation on reducing exhaust gases is in place (renewed in 2000) and an Environmental Framework Act is under development addressing air pollution and promoting the use of clean technologies; the Climate Change awareness Programme (2003) partly focused on reducing / preventing emissions, and the CD4CDM promotes CDM projects and strengthens local institutions and engineers in developing CDM projects</p>	<p>Legislation is yet under development, and institutions will need to expand their responsibilities and activities or other authorities need to be established (it will take some time before the legal and institutional framework is in place and working); several initiatives and programmes are implemented (e.g. domestic energy use and hydropower installations in the interior), but few programmes/ projects exist on emission reduction in traffic patterns and the agricultural sector; although the forestry sector does not specifically focus on reduced emissions, newly applied technologies like Reduced Impact Logging have resulted in a decrease of emissions from timber exploitation</p>	<p>There is a strong capacity need at governmental institutions (ATM, ROGB, LVV, NH) to regulate emissions and take pro-active action to international developments (e.g. Payments for Ecosystem Services (PES))</p>
<p>4.1(d) <i>Sustainable management, conservation and enhancement of sinks and reservoirs</i></p>	<p>Suriname has established several Protected and Multiple-Use Management Areas, in total covering 13% of the country's land surface (approximately 2 million hectares), mainly covered with forests. For non protected areas other legislation is in place to prevent forest loss through a licensing system and the promotion of sustainable use</p>	<p>Although legal frameworks are sufficiently in place, implementation and control are not always easy, illegal gold mining severely threatens carbon reservoirs (and biodiversity and public health)</p>	<p>Responsible institutions for monitoring and control (LBB, NB, STINASU, SBB) have insufficient equipment, financial means and human capital for proper management and conservation</p>

<b>Requirement</b> <i>(convention and COP decisions)</i>	<b>National initiative to address</b> <i>(plans, strategies, activities)</i>	<b>Progress</b> <i>(how well the requirement is being addressed)</i>	<b>Constraints preventing compliance</b>
4.1(e) <i>Adaptation to impacts of climate change – integrated plans for coastal zone management, water resources and agriculture</i>	NCAP II developed adaptation measures and current & future coastal profiles for Paramaribo and Wanica; in 2007 a National conference was held on 'Water and the future development of Suriname', aimed at knowledge sharing and supporting plan development regarding management of the coastal zone and water reserves; in the near future an Integrated Coastal Zone Management Plan will be developed; OW is currently building several dikes along the Suriname and Commewijne river	Almost all initiatives are in the stage of plan development, hardly any concrete decisions are made and implemented	Incorporating appropriate adaptation measures in decision-making is relatively new and quite complicated; sea level rise could have severe effects on the coastal areas and a wide range of opinions exists on appropriate adaptation measures
4.1(f) <i>Incorporating climate change considerations in policies and actions and development of appropriate methods</i>	Suriname is currently formulating an Environmental Framework Act regarding the establishment of an Environmental Authority, and climate change considerations are incorporated in the MOP and several other policies of the GoS	It took many years to develop the Environmental Framework Act, which awaits approval now; it is more and more considered essential to incorporate climate change considerations in policies	Although awareness is increasing within the GoS, there is too little capacity to establish appropriate plans, programmes, regulations etc., most GoS institutions have little or no expertise on climate change (and adaptation and mitigation measures)
4.1(g) <i>Research, technology and databases to better understand and cope with climate change</i>	Only a small number of observation networks is operating (meteorological, hydrological and marine), next to ad hoc inventories for specific projects	Due to the limitations of the national scientific society, till present the country is unable to meet this requirement sufficiently; data necessary for monitoring and research is lacking or not structured in accessible databases and therefore research projects are experiencing difficulties	Monitoring and research observation networks have limited technology and expertise; skilled expertise at MDS, WLA, AdeKUS and OW is limited; long procedures to obtain financial means for equipment and a personnel stop at the GoS retard the necessary strengthening of GoS institutes; the AdeKUS plays too little role in developing innovative technology due to other responsibilities and activities

<b>Requirement</b> <i>(convention and COP decisions)</i>	<b>National initiative to address</b> <i>(plans, strategies, activities)</i>	<b>Progress</b> <i>(how well the requirement is being addressed)</i>	<b>Constraints preventing compliance</b>
4.1(h) <i>Exchange of information related to climate and climate change</i>	Suriname participated in the Netherlands Climate Assistance Programme I and II (1995-1995 and 2003-2008); Suriname became a participant of the NL-REDD platform and is now preparing for an Country Led Initiative (CLI) in September 2008 in Suriname (in view of the UNFF 8)	Regarding forests, the country progressively becomes engaged in international fora related to climate and climate change (e.g. CLI); no structural dialogue on Climate Change issues exists with neighbouring or similar counties	Although several experts and institutions recognise the need for exchange of information, both at international and national level dialogue networks and databases hardly exist; Suriname still has too little experts on climate change
4.1(i) <i>Education, training and public awareness on climate change and participation of all stakeholders</i>	NIMOS implemented a climate change awareness programme in 2003, a concrete follow up of that programme still needs to be developed; the AdeKUS incorporates climate change considerations into the curricula	Hardly any activities have been undertaken after the climate change awareness programme; the current number of students educated in climate change issues promises a gap fill of experts in the near future	It is expected that within 5-10 years enough junior experts will be available (AdeKUS figures); low occupancy at involved institutions delay climate change awareness activities
4.1(j) <i>Communicate with COP</i>	In 2005 the GoS finalised its first national communication to the UNFCCC; the second national communication project document is in preparation	Only once Suriname reported to the COP (first national communication), this communication only covered the coastal area	Experts' availability is limited due to multi-responsibilities
<b>ADDITIONAL (DERIVED FROM MARRAKECH ACCORDS*)</b>			
<i>Assessing vulnerability and adaptation</i>	The first national communication covers an assessment of vulnerability and adaptation, which is currently further elaborated in the KAP (still to be approved); other studies and governmental documents (e.g. Policy and Action Programme of Non-Urban Environment and DMGPA) incorporated climate change effects and proposed adaptation measures	The DMGPA stresses the vulnerability of Paramaribo and proposes several adaptation measures; the GoS started with a project to build several dikes along the Suriname and Commewijne river	Assessing vulnerability and developing appropriate adaptation is hindered by the lack of proper (historical) data; as a consequence the current proposed measures often have limited scientific base, making the measures relatively insecure; there is a strong need for inventories and databases

<b>Requirement</b> <i>(convention and COP decisions)</i>	<b>National initiative to address</b> <i>(plans, strategies, activities)</i>	<b>Progress</b> <i>(how well the requirement is being addressed)</i>	<b>Constraints preventing compliance</b>
<i>Assessing mitigation options</i>	The first national communication lists several possibilities to mitigate carbon emissions, and through the promotion of CDM projects the Surinamese society is stimulated to find creative ways for reduced carbon emissions	Concrete actions, programmes and projects are still to be developed; as a non-annex country and due to the high vulnerability to sea level rise, Suriname focuses mainly on adaptation measures	The AdeKUS still plays a limited role in developing innovative technologies; in general in Suriname priority is given to adaptation measures
<i>Institutional capacity-building, notably through Secretariats or focal points</i>	The CD4CDM project focuses on capacity building of individuals at governmental institutions (ATM, NIMOS) and others (public and NGO's)	Capacity building seems to be limited to individual capacity building; little actions are undertaken towards institutional or systemic capacity building	Involved persons are still in process of developing expertise; climate change issues are quite new topics for individuals and institutions
<i>Improved decision-making, including assistance for participation in international negotiations</i>	In September 2008 the country will host the CLI-UNFF conference and is preparing itself to be a full participant, negotiating its potential benefits as being a High Forested Low Deforestation (HFLD) country	Next to the CLI meeting, little has been addressed; GoS is seeking international expertise to assist in decision-making on especially PES	There is a need for human capacity and skill development on a political level
<i>Working with the Clean Development Mechanism</i>	The CD4CDM project is currently implemented and aims at the promotion of and capacity building regarding CDM; the CDM Bureau is in process of establishment	Several workshops and meetings are organised and potential project developers are trained in project writing; due to little capacity available for the establishment, the CDM Bureau will be set up within existing structures (ATM/NIMOS)	National scale urges to keep the CDM office small and to expand tasks of current employees; capacity building of CDM Bureau officers is needed (and in process)
<i>Enhancing the enabling environment</i>	Legislation on environmental issues and CDM Bureau is in process, and the planning Act is currently reviewed	The establishment of several authorities or agencies has not yet been achieved	Political decision-making processes often take a long time

\* The Marrakech Accords contain a list of capacity needs for developing countries, which is partly overlapping the convention commitments. Those that are supplementary are mentioned here (see also Annex II).

In table 3 responsible and implementing agencies to the convention requirements are listed. For each several projects and/or programmes are listed (if in place) that are currently implemented or will start in the near future.

**Table 3: Responsible and implementing agencies in Suriname to the UNFCCC**

<b>Requirement</b> (convention and COP decisions)	<b>General responsible agency</b>	<b>Implementing agency</b>	<b>Projects / programmes</b>
<b>UNFCCC CONVENTION REQUIREMENTS</b>			
<i>4.1(a) National greenhouse gases inventories of emissions by sources and removals by sinks</i>	ATM	NIMOS, assisted by consultants and AdeKUS	The fourth GHG inventory, to be implemented in the near future; the latest available IPCC guidelines will be used for this inventory.
<i>4.1(b) National (and regional) programmes to mitigate climate change and measures to adapt to climate change</i>	ATM	NIMOS / ROGB / OW PLOS / SBB / SPS and others	KAP is prepared and expected to be approved in the near future. The First National Communication focused on the coastal zone; the Second National Communication will take into consideration the latest developments over the entire country, and will include also vulnerability assessments of the interior of Suriname.
<i>4.1(c) Development, application and diffusion of technologies, practices and processes that control, reduce or prevent emissions in all relevant sectors</i>	ATM	AdeKUS	NCAP I: first assessment of the vulnerability of the coastal zone and a GHG inventory. NCAP II: relation climate change and livelihood, adaptation measures to mitigate the adverse impacts of the sea level rise and the ongoing human intervention on the coastal ecosystems, and recommendations regarding possible expansion (growth) of the urban areas within the coastal districts Paramaribo and Wanica.
<i>4.1(d) Sustainable management, conservation and enhancement of sinks and reservoirs</i>	ROGB	SBB / LBB / NB / district and resort councils and representatives	Ongoing management of protected areas and multi-use management areas
<i>4.1(e) Adaptation to impacts of climate change – integrated plans for coastal zone management, water resources and agriculture</i>	ATM	ATM, PLOS (with IDB financing), consultants, LVV, OW, AdeKUS	Conference on Water and the future development of Suriname (each two years) In the near future: development of a ICZM Plan and implementation of a pilot project
<i>4.1(f) Incorporating climate change considerations in policies and actions and development of appropriate methods</i>	ATM	PLOS, ATM, ROGB, LVV, NH, TCT, and other ministries	Increasingly paragraphs on Climate change concerns are added to policies and programmes of the GoS
<i>4.1(g) Research, technology and databases to better understand and cope with climate change</i>	OW	MDS, WLA, AdeKUS	Several studies with regards to coastal erosion and drainage have been carried out incorporating climate change effects and concerns

<b>Requirement</b> <i>(convention and COP decisions)</i>	<b>General responsible agency</b>	<b>Implementing agency</b>	<b>Projects / programmes</b>
4.1(h) <i>Exchange of information related to climate and climate change</i>	ATM, ROGB	ATM, ROGB	NCAP I and II. CLI in September 2008 in Suriname (in view of the UNFF 8).
4.1(i) <i>Education, training and public awareness on climate change and participation of all stakeholders</i>	ATM / MINOV	NIMOS, AdeKUS	A Climate Change Awareness programme in 2003; no current awareness projects / programmes. Curricula at AdeKUS.
4.1(j) <i>Communicate with COP</i>	ATM	Focal point: currently ATM, with consultants	First National Communication was elaborated by NIMOS in cooperation with SAHO
<b>ADDITIONAL (DERIVED FROM MARRAKECH ACCORDS*)</b>			
<i>Assessing vulnerability and adaptation</i>	OW / NIMOS	NIMOS, OW, AdeKUS	The second national communication (to be implemented in the near future) will incorporate the vulnerability and adaptation measures
<i>Assessing mitigation options</i>	NIMOS	NIMOS, ATM, ROGB, NH, AdeKUS	The second national communication (to be implemented in the near future) will incorporate the mitigation options
<i>Institutional capacity-building, notably through Secretariats or focal points</i>	Focal point: currently ATM	ATM / NIMOS	CD4CDM and individual projects.
<i>Improved decision-making, including assistance for participation in international negotiations</i>	ATM / BUZA / ROGB	Presidential Task Force (for CLI) / ROGB	CLI in September 2008 in Suriname (in view of the UNFF 8).
<i>Working with the Clean Development Mechanism</i>	ATM	Currently NIMOS; a CDM Bureau (responsible for evaluation and approval of CDM projects) will be established in the near future	No CDM projects yet. Only CD4CDM project
<i>Enhancing the enabling environment</i>	GoS	GoS	

\* The Marrakech Accords has a list of capacity needs in developing countries, which is partly overlapping the convention commitments. Those that are supplementary are mentioned above (see also Annex II).

### 4.1.2 Cross-cutting linkages among thematic areas

Although the identification of cross-cutting issues is no part of the three thematic assessments yet, during the elaboration of this document several potential linkages and overlap were identified on both content and political level. On a content level the assessments are expected to show overlap within the following areas:

- Forests, both protection and sustainable use. Forests do not only serve as a warehouse for mega-tonnes of carbon, they also control potential erosion and degradation of land and harbour a paramount richness of biodiversity.
- Water, both sea level rise (coastal regions) and the risk of flooding (interior). Sea level rise will change coastal ecosystems dramatically, resulting in a loss and degradation of natural areas and agricultural lands. These changes can result in adverse effects on coastal ecosystems biodiversity and will lose their coastal protection functions.
- Physical planning, especially of the coastal regions. To manage future developments and balance these with the requirement of the Rio conventions, physical planning is of utmost importance. In this context physical planning is not limited to land use only, but should include options for mitigating climate change (CO<sub>2</sub> balances).

On a policy and political level overlapping issues from the three assessment are:

- A lack of content knowledge with policy makers;
- An inadequate functioning network to put the country's interest forward, both national, regional and on the international agendas;
- Cross-sectoral coordination and decision-making is needed, among the ministries and in cooperation with relevant stakeholders;
- The need for the establishment of an Environmental Authority and approval of the Environmental Framework Act.

### 4.1.3 Gaps

From the assessment several gaps in meeting the convention's requirements and the main accompanying capacity building issues can be identified:

- At a policy making level: policy makers, due to the limited resources and facilities are lacking the necessary knowledge, tools and scope, capacity building is required;
- Implementing institutions: due to limiting facilities and financial resources, implementing agencies are missing operational power;
- Data networks: lack technicians, skilled fieldworkers and appropriate instruments and techniques for adequate data collection (e.g. on the coastal region with respect to climate change and its (potential) effects);
- Information networks: exchange of information and database access show large deficiencies; this knowledge base needs to be strengthened;
- Dialogue networks: these hardly exist, interaction between different portals needs to be strengthened and international knowledge sharing and cooperation needs to be promoted.

## 4.2 Identification of Key Issues and Prioritization

The main focus of Suriname is and should be on adaptation as sea level rise will have enormous consequence for the economic zone of Suriname. Mitigation is important to incorporate in policies and programmes, but as a non-annex country, Suriname does not have fixed levels for reduction of carbon emissions. With regards to adaptation measures, national priorities are captured in the broad fields of water management and physical planning. Next, the largest carbon sink of Suriname is in its forests which covers over 90% of Suriname's land area. Logically forests are the main issue with regards to mitigation. It might be clear that these three issues (water, physical planning and forests) are interrelated, as for instance mangrove forests are a sink, do protect coastal areas against erosion by the sea and need to be considered in physical planning.

**Table 4: Key issues and prioritization**

<b>Issue</b>	<b>Scale of problem<sup>1</sup></b>	<b>Level of Concern<sup>1</sup></b>	<b>Ability to Adequately Address Issue<sup>2</sup></b>	<b>Priority Ranking<sup>3</sup></b>
<b>Water</b>	<b>Regional</b>	<b>National</b>	<b>Low, medium</b>	<b>2</b>
Coastal erosion and flooding Rainfall and run-off Data availability (coastal & marine)				
<b>Physical Planning</b>	<b>Local</b>	<b>Local, regional</b>	<b>Low</b>	<b>1</b>
Allocation of protected areas and multiple use areas Urban infrastructure in coastal region				
<b>Forests</b>	<b>Global, National</b>	<b>Global, regional, local</b>	<b>Low, medium</b>	<b>2</b>
Conservation Sustainable use Carbon stocks PES				

<sup>1</sup> Local, regional, national, or global

<sup>2</sup> Low, medium, or high

<sup>3</sup> Relative ranking from 1 to 5 of the problem(s) faced by the country (1 = most severe problem(s), 2 = second most severe problem(s), etc.)

Although the relations between climate change and forest cover and water systems are 'direct' and have a negative effect on vulnerable ecosystems (and its services) and an impact on people livelihoods, still the priority for addressing the limited capacity in physical planning is ranking high. Proper physical planning integrates sound land use planning and the wise utilisation of ecosystem services. This creates a basis for international support to cover capacity needs, both individual and institutional. The GoS should create the necessary enabling environment (systemic level) in its political arena.

### 4.3 Capacity Constraints of Priority Issues

Table 5 gives an overview of capacity constraints at three levels and subdivided in the key issues water, physical planning and forests.

**Table 5: Priority issues and capacity constraints**

Priority Issues	Capacity Constraints		
	Individual	Institutional	Systemic
<b>Water:</b>			
Coastal erosion and flooding	Skilled expertise within GoS is still developing	Responsibilities for policy and implementation are scattered among different departments	An integrated and cooperating management focus is lacking
Rainfall and run-off	Field stations are lacking human capital for observations	Head quarters are weak in number of employees and availability of means	
Data availability (coastal & marine)	Lack of financial, instrumental and human capital for proper ongoing inventories		Little political attention for inventories and databases
<b>Physical Planning:</b>			
Allocation of protected areas and multiple use areas	Responsible GoS departments and institution do lack human capacity for proper planning	Responsibilities are scattered among different departments and ministries, without clear cooperation structures	Planning Act does provide opportunities but is hardly implemented / used; land rights of indigenous and maroon communities is still unsolved
Urban infrastructure in coastal region	Little climate change expertise available within Suriname in the context of infrastructure	Inter-sectoral cooperation is lacking, opportunistic developments without a clear physical planning (non-transparency)	Planning Act does provide opportunities but is hardly implemented / used
<b>Forests:</b>			
Conservation	Especially daily management of protected areas is poor, due to too little means and (skilled) people	Involvement of local communities in conservation is a difficult issue, and often results in stagnation of plans and activities	Land rights issue of indigenous and maroon communities is still unsolved
Sustainable use	Lack of skilled personnel, forest sector is still developing capacity towards sustainable practices	Forest Authority is not yet established, but needed to support capacity strengthening of the (private) forest sector	Land rights issue of indigenous and maroon communities is still unsolved

<b>Priority Issues</b>	<b>Capacity Constraints</b>		
	<b>Individual</b>	<b>Institutional</b>	<b>Systemic</b>
Carbon stocks and PES	Knowledge within Suriname regarding PES very limited	No adequate structures are in place for innovative PES's	Suriname should pro-actively act to international developments on payments for forests, but hardly has a clear and interdepartmental view on these issues
<b>Common Constraints within Thematic Area</b>	GoS has human capital at lower level, but little at higher policy and technical level	Scattered responsibilities among institutes, inter-sectoral cooperation is lacking and some supporting and controlling agencies are not in place; financial and instrumental means are often lacking	No clear direction of GoS regarding integrating main issues, unsolved land rights, hardly implementation of existing laws

#### **4.4 Gap Analysis Conclusions**

The issues of climate change and its (potential) effects for Suriname is still a quite new topic, and capacity to adapt to climate change and implement appropriate mitigation measures is still in development. Most of the responsible agencies lack sufficient experts and/or expertise to develop proper legislation, policies and programmes, and to incorporate climate change issues in existing structures and processes. Some supporting agencies are not yet in place, and are expected to have only limited possibilities to attract specific expertise for effective and appropriate regulations and implementation. These capacity constraints urge for creative solutions to strengthen existing capacity at an individual and institutional level, join activities among the different MEA's requirements and work as much as possible along existing structures and processes.

## 5 General Conclusions and Recommendations

Meeting the UNFCCC requirements is not an easy task and asks for both knowledge and human capacity on an individual, institutional and systemic level. The results of the thematic self-assessment of Suriname's capacity for doing so, demonstrates this. The assessment shows the country's limitations both in numbers of experts as well as in the level of expertise. Because of this twofold limitation, Suriname faces the challenge to meet the conventions' requirements by adapting a realistic and feasible strategy, based on:

- Clustering of 'fields of intervention';
- Distinguish between 'hype' and 'trend';
- Create synergy between the three conventions' capacity building;
- Prioritising of the conventions' requirements and related actions;
- Give way to cross-cutting issues and capacity needs.

Regarding Climate Change, this thematic assessment suggests a clustering of activities, resulting a need for capacity development in the fields of forests, water and physical planning, giving the latter the highest priority. During the next steps towards a Capacity Action Plan, this suggestion should be harmonized with the outcomes of the UNCCD and UNCBD thematic assessments. Although some cross-cutting linkages are already mentioned in this document, overlapping issues should be analysed during the next step towards the action plan.

Next, one should try to differentiate between 'hype' and 'trend', meaning that the limited (human) capacity, most distinct within the ministries and related institutions, should be geared to issues that really matter and make the difference in meeting the conventions' requirements. Capacity building should concentrate on trends; ignore hypes.

Creating synergy between the three conventions' capacity building is of utmost importance. This not only concerns the above mentioned synergy between (clustered) fields of intervention, but also capacity building initiatives. For this, cross-sector communication and cooperation are a first condition to be met.

In this thematic assessment, only the capacity needs related to the UNFCCC are analysed. Stakeholders to the convention are grouped in three categories (table 1, page 18) of which the first two have a direct stake in the implementation of the conventions' requirements. These are all ministries (mandated) and/or related government institutions (tasks). Capacity building is therefore most urgently needed within these ministries and institutes. Capacity building 'on what' is summarised in table 2 (page 22) describing 'constraints preventing compliance', while table 3 (page 27) gives an overview of ongoing project and/or programmes and those to be started in the near future to meet the UNFCCC requirements.

This number and intensity of actions can only be dealt with by clustering, prioritising and seeking synergy. The identification of cross-cutting issues is the next step in the NCSA Resource Kit. Only after that step, it is possible to draw the overall Capacity Action Plan.

Finally, partly to summarise and/or additionally, the following recommendations towards the following steps towards the action plan are made:

- Focus on the establishment of authorities (such as the Forest and the Environmental Authority, CDM Bureau) that regulate climate change issues and seek for possibilities to place them within existing institutes;
- Focus on a few capacity issues and draw profound actions towards them, instead of developing a broad list of actions;
- Distinguish between capacity building of institutes in Suriname for ongoing responsibilities and activities and attracting external (inter)national expertise for short term activities;
- If attracting international expertise, Suriname should always keep control over project development and implementation; therefore appropriate agencies / authorities should be established;
- Learn from similar activities, procedures and institutional frameworks of similar countries (both in and outside the region);
- Promote national networks for policy making;
- Promote international networks for the sharing of knowledge and development of cross-boundary solutions;
- If major changes in physical planning are proposed, huge attention should be given to awareness creation among public society.

It is of utmost importance to implement activities properly along priorities and to develop creative solutions to secure a successful implementation of the UNFCCC requirements.

## Annex I Stocktaking Stakeholders List

UNFCCC stakeholders in Suriname that were short listed during the stocktaking workshop in 2007:

WHO	WHAT	WHY	HOW
<i>Stakeholder name</i>	<i>Stakeholder interests, position and official mandate</i>	<i>Reasons for inclusion</i>	<i>(Possible) role in the implementation of the convention</i>
Maritime Authority of Suriname (MAS)	Data collecting and international maritime legislation	Working group on the formulation of a sea pollution law	
Ministry of Transport, Communication and Tourism (TCT)	Legislation		
Energy Companies of Suriname (EBS)	Emission because of fossil fuels use for generating electricity	Working group Kyoto Protocol	
Ministry of Labour, Technological Development and Environment (ATM)	Coordinating environmental policies; implementing ratified conventions	Responsibility of the several institutes	
European Delegation (ED)	Providing funds to cope with Climate Change		
Anton de Kom University of Suriname (AdeKUS)	Research and cooperation with other institutes		
National Herbarium of Suriname (BBS)	Field research, plant collection and determination		
Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)	Collecting genetic material (seeds); coordinating policy regarding pesticides	Commission on Climate Change	
Chamber of Commerce and Industries (KKF)	Monitoring; caring for social and economic development		
National Institute for Environment and Development in Suriname (NIMOS)	Awareness; preparing KAP; technical assistance towards ATM	Responsibility with other institutes and organisations	
Meteorological Service of Suriname (MDS)	Data collection		
Community Development Fund Suriname (CDFS)	Local community development		
Foundation for Mobilisation of Labour and Development (SAO)	Conducting training for awareness		

## Annex II Convention Commitments and Marrakech Accords

Commitments listed in Convention Articles	4.1(a) National greenhouse gases inventories of emissions by sources and removals by sinks	4.1(b) National (and regional) programmes to mitigate climate change and measures to adapt to climate change	4.1(c) Development, application and diffusion of technologies, practices and processes that control, reduce or prevent emissions in all relevant sectors	4.1(d) Sustainable management, conservation and enhancement of sinks and reservoirs	4.1(e) Adaptation to impacts of climate change – integrated plans for coastal zone management, water resources and agriculture	4.1(f) Incorporating climate change considerations in policies and actions and development of appropriate methods	4.1(g) Research, technology and databases to better understand and cope with climate change	4.1(h) Exchange of information related to climate and climate change	4.1(i) Education, training and public awareness on climate change and participation of all stakeholders	4.1(j) Communicate to COP
Capacity needs listed in Marrakech Accords										
Preparing national communications										X
Developing national climate change programme		X								
Preparing and managing greenhouse gas inventories, including emission database management	X						X			
Research and systematic observation of climate and other functions							X			
Assessing vulnerability and adaptation										
Developing and implementing adaptation plans and measures					X					
Assessing mitigation options										
Developing and transferring technology			X							
Institutional capacity-building, notably through Secretariats or focal points										

Commitments listed in Convention Articles  Capacity needs listed in Marrakech Accords	4.1(a) National greenhouse gases inventories of emissions by sources and removals by sinks	4.1(b) National (and regional) programmes to mitigate climate change and measures to adapt to climate change	4.1(c) Development, application and diffusion of technologies, practices and processes that control, reduce or prevent emissions in all relevant sectors	4.1(d) Sustainable management, conservation and enhancement of sinks and reservoirs	4.1(e) Adaptation to impacts of climate change – integrated plans for coastal zone management, water resources and agriculture	4.1(f) Incorporating climate change considerations in policies and actions and development of appropriate methods	4.1(g) Research, technology and databases to better understand and cope with climate change	4.1(h) Exchange of information related to climate and climate change	4.1(i) Education, training and public awareness on climate change and participation of all stakeholders	4.1(j) Communicate to COP
Improved decision-making, including assistance for participation in international negotiations									(x)	
Working with the Clean Development Mechanism										
Meeting needs arising from implementation of Convention Articles 4.8 and 4.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Information and networking, including databases							(x)	x		
Education, training and public awareness raising									x	
Enhancing the enabling environment										

X = same issue

(X) = Partly same issue

n.a. = not applicable

= Not covered by other list

= not entirely covered by other list

## Annex III Presentation at Validation Workshop



### Thematic Assessment

United Nations Framework Convention on Climate Change

*Prepared by:  
Environmental Services & Support  
Sietze van Dijk & Rutger de Wolf*

1 van 16



### Overview

1. Convention Thematic Area
2. Policy and Legal Background
3. Institutions
4. Stakeholders
5. Commitments Review
6. Key issues / priorities
7. Capacity constraints
8. Conclusions

2 van 16



## Convention Thematic Area

Two areas of concern:

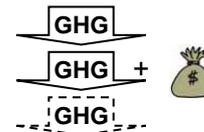
- Mitigation (reducing greenhouse gas emissions)
- Adaptation (measures to cope with climate change)

UNFCCC: no mandatory limits on GHG emissions

Protocols: mandatory emission limits – Kyoto Protocol

Parties:

- Annex 1 industrialized countries
- Annex 2 developed countries
- Non-annex developing countries



3 van 16



## Policy and Legal Background

**Legislation:**

- Nature Preservation Act (1954)
- National Planning Act (1973)
- Forest Management Act (1992)
- Government Decree on Nature Protection (1998)
  
- *Environmental Framework Act*

4 van 16



## Policy and Legal Background

### Policy:

- Drainage Master plan Greater-Paramaribo Area (2001)
- National Forest Policy (2003)
- MOP 2006-2011
- Policy of OW 2006-2011
- Policy of ATM (2007)

5 van 16



## Policy and Legal Background

### Action plans:

- *Climate Action Plan (Coastal Area)*
- *Strategic Action Plan for the Forest Sector*

### Other relevant developments:

- mining, forestry, agriculture
- sustainable forestry practices

6 van 16



## Institutions

ATM – NMR – NIMOS

ROGB

PLOS (SPS)

NH

LVV

OW (WLA, MDS)

National Climate Change Steering Committee

7 van 16



## Stakeholders

### 1 Mandated ministries / institutions with clearly described responsibility

- ATM – NIMOS – NMR

### 2 Institutions with clearly described tasks

- ROGB – PLOS – OW – NH – LVV  
SPS – MDS – MAS – SBB

### 3 Ministries, institutions and individuals effected by implementation

- VG – ABS – NCCR – AdeKUS  
EBS – SWM – GLIS – Staatsolie  
Oil importers – PHS – VSB – ASFA

8 van 16



## Commitments Review

### Concrete activities:

- NCAP I (1995-1996)
- First National Communication (2003)
- Climate Change Awareness Program (2003)
- NCAP II (2003-2008)
- CD4CDM (2007-ongoing)
  
- *Climate Action Plan (coastal area + interior)*
- *Second National Communication*
- *Integrated Coastal Zone Management Plan*

9 van 16



## Commitments Review

### Other relevant activities:

- Dikes along Suriname and Commewijne river
- Drainage Masterplan Greater Paramaribo
- MUMA's and protected area's
- Regulation on SFM
- National conference
- Ongoing observations
- Country Led Initiative (Paramaribo)

10 van 16



## Commitments Review

### Policy making level

little knowledge and missing scope

### Implementation and operation

limited facilities and financial means available

### Observation networks

to little technical personnel, skilled workers, appropriate instruments & techniques

### Information

to little data on coastal region / climate change effects; weak exchange of information and database access

### Dialogue networks

hardly exist

11 van 16



## Key issues / priorities

### Water

Coastal erosion and flooding

Rainfall and run-off

Data availability (coastal & marine)

### Land-use planning

Allocation of protected areas and MUMA's

Urban infrastructure in coastal region

### Forests

Conservation

Sustainable use

PES

12 van 16



## Capacity constraints

### Individual

- GoS: little higher technical level (skills / knowledge)

### Institutional

- Financial and instrumental means very limited
- Scattered responsibilities
- Intersectoral cooperation lacking
- Some agencies not in place (Forest Authority, Environmental Authority, Planning Council)

### Systemic

- No clear direction regarding integrating main issues
- Unsolved land rights
- Hardly implementation of existing laws

14 van 16



## Conclusions

New topic – insufficient experts

Capacity in development

Few proper plans / programs / laws / integration

Some supporting institutions not yet in place

Focus on adaptation

### Recommendations:

- Strengthening existing individuals and institutions
- Join activities among different convention requirements
- Developments along existing processes and structures
- Just a few actions

15 van 16