MARINE MANAGEMENT IN SURINAME

CBD GAP ANALYSIS AND LEGISLATIVE REVIEW REPORT

Nancy del Prado, August 2017











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Summary

In its national report to the CBD, Suriname stated that no progress has been made in achieving Aichi target 11 for 2020 (10% protected coastal and marine areas) and that further measures are required to achieve targets 4, 6, 10 and 14.

The report is a legal gap analysis to be able to determine the status of Suriname as regards achieving the Aichi targets; proposals are also being made for actions that should be taken in order to be able to realize the targets.

The stakeholder analysis has shown that some stakeholders within the government are not familiar with the Aichi targets, but have some knowledge of activities that were developed in the context of the protection of biodiversity. It was generally agreed that concrete measures have been included in policy documents such as the OP 2012-2016 and the NBAP to protect the biodiversity and the ecosystems, but the implementation thereof is inadequate.

An evaluation of the legal and institutional framework for the protection of the coastal and marine areas has shown that the legislation is fragmented and falls under the jurisdiction of various ministries. In addition, it appears that the legislation is out of date and insufficiently adequate to protect the coastal and marine area. Enforcement of legislation is also lacking, due to a shortage of financial resources (including equipment), lack of manpower and inefficient use of existing human resources. In addition to the legislation in force, a number of draft laws have also been prepared that support the protection of the ecosystems and the biodiversity. Examples in this respect are the draft of the Fisheries Act, the draft of the Environmental Act and the draft of the Coastal Protection Act, etc. It is important that the draft legislation is approved for the integral protection of nature and in this case the coastal and marine area. In addition to the national legislation and the UNCBD, numerous other conventions have been ratified by Suriname, which also support the protection of the Marine areas.

These have also been analyzed. They concern conventions aimed at attempting to regulate various aspects of marine biodiversity such as pollution (MARPOL, London Dumping), protection of water areas (Ramsar Convention), conservation of flora and fauna in the Western Hemisphere, the trade in wild animals and plants (CITES), climate change (UNFCCC) and whales (Whales Convention). Furthermore, there is an important regional convention specifically aimed at the protection of marine biodiversity in the Caribbean Sea, namely the

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Cartagena Convention. This Convention seeks to protect the marine environment by obliging the parties to take the necessary measures to prevent, control and reduce pollution caused by ships, by dumping, from the land, by seabed exploration or exploitation and also by atmospheric discharges. Suriname is not yet a party to this convention.

In order to address the identified gaps and obstacles to still achieve the Aichi Targets, a number of actions have been recommended. In general terms, it is recommended to modernize the current legislation by means of adapting existing legislation and/or adopting new legislation. Institutional strengthening and actual implementation of policies that have been laid down. Table 1 contains the overview of proposed actions to address the identified gaps and obstacles.

With regard to the specific target of 10% protected marine area, an option has been given in the last chapter for 3 legal constructions that will have to be elaborated at a later stage. The modernization process of the Nature Conservation Act must also receive specific input with respect to the protection of the marine area.

List of Abbreviations

BRD	Bycatch Reduction Device
CBD	Convention on Biodiversity
СВО	Community Based Organization
CI	Conservation International
CITES	Convention on International Trade in Endangered Species
COP	Conference of Parties
CSNR	Centraal Surinaams Natuur Reservaat - Central Suriname Nature Reserve
DNA	De Nationale Assemblee – The National Assembly
EEZ	Exclusieve Economische Zone – Exclusive Economic Zone
ESIA	Environmental and Social Impact Assessment
GEF	Global Environment Facility
GMD	Geologisch Mijnbouwkundige Dienst – Geological Mining Service
100-visserij	Illegale, Ongemelde en Ogereglementeerde visserij - Illegal, unreported
	and unregulated fishing activities
LBB	Dienst s'Lands Bosbeheer – National Forest Management Service
MAS	Maritieme Autoriteit van Suriname – Maritime Authority Suriname
MEA	Milieu Effecten Analyse – Environmental Impact Assessment
MPA	Marine Protected Area
MUMA	Multiple Use Management Area
NBAP	Nationaal Biodiversiteits Actie Plan – National Biodiversity Action Plan
NBS	Nationale Biodiversiteits Strategie – National Biodiversity Strategy
NBSAP	Nationaal Biodiversiteits Strategie en Actie Plan - National Biodiversity
	Strategy and Action Plan
NCCR	Nationaal Coördinatie Centrum voor Rampenbeheersing – National
	Coordination Centre for Disaster Management
NGO	Niet Gouvernementele Organisatie – Non-Governmental Organization
NIMOS	Nationaal Instituut voor Milieu en Ontwikkeling in Suriname – National
	Institute for Environment and Development
OP	Ontwikkelings Plan – Development Plan
REBYC	Reduction of Environmental Impact from Tropical Shrimp Trawling,
	through the Introduction of Bycatch Reduction Technologies and Change
DCD	of Management
RGB	Ruimtelijke Ordening, Grond en Bosbeheer - Spatial Planning, Land and
	Forest Management
ROVB	Regionale Organisaties voor Visbestanden Beheer – Regional Organization
	for Fish Stock Management
TED	Turtle Excluder Device
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
VMS	Vessel Monitoring System
WWF	World Wildlife Fund



1 Introduction

1.1 Background

Both Suriname and Guyana have indicated in their national reports to the CBD that no progress has been made in achieving Aichi target 11 for 2020 (10% protected coastal and marine areas) and further measures are required to achieve targets 4, 6, 10 and 14. In this context, the European Commission has approved a project entitled "Promoting Integrated and Participatory Ocean Governance in Guyana and Suriname: The Eastern Gate to the Caribbean". The project will significantly improve the protection of the marine and coastal resources of Guyana and Suriname through the establishment of marine protected areas and informed marine spatial planning.

The project area supports important fishing areas, breeding and nesting areas and a rich diversity of sea species, and has both regional and global significance. While major threats are recognized (overfishing of some species, increased hydrocarbon exploration), there are significant gaps in data that hamper efforts for sustainable management of the marine environment.

This assignment is part of the aforementioned regional EC project and aims in particular at assisting Suriname to achieve the Aichi targets within the context of the protection of the marine environment. The EC project will demonstrate that with data, participatory spatial planning and targeted capacity building, the biodiversity can be preserved and economic activities, compatible with ocean health, can be promoted. Specifically, for Suriname this project should result in 2 important outcomes that will have a substantial positive impact on the marine environment:

- 1. Designation of 10% of Suriname's Exclusive Economic Zone as Marine Protected Area (from a baseline of 0%)
- Catalyzing improved marine spatial planning processes, which will provide an ecosystem-based framework for the management of activities in the marine environment.

As part of the aforementioned regional project, a CBD Gap Analysis must be conducted, which is an assessment of the national legislation and the policy in Suriname. For this purpose the laws and regulations are studied with the aim to examine to what extent they can contribute to the achievement of the specific Aichi targets 4, 6, 10, 11 and 14. Based on this gap analysis, an action plan will be prepared to as yet address the identified gaps and obstacles.

1.2 Activities

The Consultant carries out her activities according to the guidelines of WWF Guianas and will also report directly to the Marine Conservation Officer.

The general terms of reference of the Consultant comprise the following:

i. Examination of existing legislation and policies;

ii. Assessment of the existing legislation and identification of the gaps to be able to meet the CBD 2020 targets and initial recommendations for adjustments .;

iii. Identification of the obstacles to assess the CBD 2020 objectives and simultaneous recommendations¹ for addressing such obstacles;

iv. Identification of the positive and negative implications of the recommendations mentioned in (ii) and (iii).

In order to implement the general tasks, the consultant will carry out the following specific activities:

i. Conduct consultations with the relevant government agencies in Suriname;

ii. Review and analyse the existing national legal framework for the implementation of the CBD and an overview of existing barriers and principles and applicable statutory standards with regard to marine management;

iii. Report with detailed recommendations on proposed changes and an action plan to achieve the objectives of CBD 2020.

The expected outputs are:

i) A work plan, including an overview of existing legislation, draft of the contents of the report "CBD Gap analysis and legal review"

ii) A first draft report "CBD Gap analysis and legal review"

iii) A final report "CBD Gap analysis and legal review"

¹ In consultation with WWF it was decided not to attach a time span to the proposed actions.

1.3 Demarcation of the study

In accordance with the Terms of Reference, the study will be limited to the following:

- 1. The gap analysis is aimed at achieving the specific CBD-Aichi targets 4, 6, 10, 11 and 14.
- 2. The consultations will focus on the identified stakeholders within the government.
- 3. The starting point is to eventually designate 10% of the EEZ as Marine protected area, based on a baseline of 0%. This means that the current protected areas in the Surinamese coastal and marine area do not fall within the target of 10%.

It should be noted that the Aichi target of 10% of coastal and marine areas involves global target values. Accordingly, it is up to each country to determine what contribution it will make to the percentages globally pursued. In addition, the Quick Guide to Aichi: Target 11 indicates that in addition to nature reserves, the protected area also concerns other protected areas that allow sustainable use.

1.4 Methodology

A timeframe of 8 weeks has been allocated to this assignment. The activities are carried out in accordance with the work plan. The first weeks of the consultancy are devoted to studying relevant documentation, as well as national legislation and conventions on nature conservation and exploitation of natural resources in the marine environment of Suriname. This has created a reasonable picture of the situation in Suriname.

A questionnaire has been prepared for conducting the consultations with the identified stakeholders within the government. This was sent to the stakeholders in advance so that they could prepare for the meeting.

The assessment of the achievement of the Aichi targets was done on the basis of the "Quick Guide to the Aichi Biodiversity Targets".

Based on the desktop study and the consultation meetings, an initial draft report was produced and submitted on 19 June for review. Based on the feedback from WWF Guianas, a final report was worked on, which was submitted in the last week of June.

1.5 Chapter division

The report is an elaboration of the assignment. It starts with an introduction to the study, which lays down the reason for the study, the activities and the demarcation of the study, after which the second chapter reports on the discussions with the various stakeholders within the government.

In Chapter 3 a review is conducted of the institutional and legal framework. A complete elaboration of the national legal framework has been included in Appendix 1.

Chapter 4 deals with the actions that have already been taken to achieve the Aichi targets, in the course of which the gaps and obstacles are identified. For the sake of clarity, the gaps and obstacles are presented in tabular form.

Based on the gaps and obstacles, recommendations in the form of an action plan are presented in chapter 5, as well as the possible positive and negative implications of the action plan. The chapter ends with a proposal for a legal possibility to achieve the 10% protection of the marine area.

2 Stakeholders consultations

2.1 Introduction

For the purposes of the Gap Analysis, it is important to conduct a consultation round in addition to the desktop study, in order to determine the status of Suriname as regards achieving the Aichi targets that are aimed at the protection of the coastal and marine areas. In accordance with the Terms of Reference, the consultation round was limited to the government authorities charged with responsibilities with regard to the exploitation and/or management of the maritime area. A list of the consulted authorities has been included in Appendix 2.

In preparation of the interviews, a questionnaire was sent to the various authorities in advance. The analysis focused on the policy, the legislation and the institutional capacity to achieve the Aichi targets aimed at coastal and marine protection.

2.2 Results

The meetings were started with the question about familiarity with the Aichi targets and the remarkable thing is that the vast majority of the respondents were unfamiliar with these targets. This has resulted in none of the government authorities carrying out activities specifically aimed at achieving these targets. Nevertheless, in the context of biodiversity protection, activities are being developed that support the achievement of the specific Aichi targets. These will be highlighted in section 3.2, the Institutional framework. Below is a summary of the said consultations.

2.2.1 Threats

The threats that make it desirable for the marine environment to be protected were indicated from the perspective of the various authorities². These include:

- Oil spills;
- The discharge of ballast water from ships;
- Overfishing and illegal fishing;

² Threats that were not mentioned but are real, include the collection of turtle eggs, pollution from the territorial and inland waters, felling of mangrove trees and sand excavation of natural sandy beaches that serve inter alia as a nesting ground for sea turtles.

- Oil exploration (ships and platforms) activities that result in: noise pollution, greenhouse gas emissions from fuel use, waste water, domestic, sanitary and solid waste, accidents such as diesel and oil spills, etc.

- Ship collisions.

2.2.2 Policy

At policy level, the specific Aichi targets have not received the necessary attention, as a result of which they were not included as such in the policy. Suriname has a NBAP 2012-2016, which contains the necessary action plans regarding the protection of the biodiversity. In the formulation of the NBAP, the Aichi targets had not yet been identified, as a result of which they were not formally integrated into the policy. This means that the institutes are not familiar with these targets.

The following main points regarding the policy were brought up:

- There is a lack of an unambiguous (national) vision and awareness at different levels.
- There is currently no overarching environmental policy plan.
- The Office of the President has been responsible since 2015 for the national coordination of environmental policy. To this end, a functional Environmental Coordination Unit has been appointed at the Office of the President.
- It is the intention that NIMOS is transformed into an Environmental Authority with statutory tasks and powers. Currently, only in the case of environmental studies for Oil offshore exploration activities is attention paid to the protection of the marine environment.
- There is a lack of institutional framework for nature protection in general and marine management in particular. The policy will have to focus inter alia on strengthening the institutes.
- Adoption of environmental legislation will be approved during this period of government.
- Process of preparation, submission and approval of legislation is difficult and slow. Over the years, several legislative proposals have been prepared that have not even reached Parliament.
- The draft of the Coastal Management Act was submitted to Parliament a few years ago, but has not yet been approved. A number of adjustments have to be made thereto.

With regard to policy improvements, it was stated that the environmental policy plan that will be published in 2018, must include aspects relating to the protection and sustainable

use of the marine environment. In addition, it was indicated that provisions for the "Marine Protected Areas" must be included when formulating a new nature conservation law. The Sea Fisheries Act will also be adapted, with sustainable use of ecosystems being an important point of departure. Within the MAS there are 2 mother laws in preparation, namely the Marine Pollution Act and the Shipping Act. The first-mentioned will also have to provide legal protection to the marine environment.

2.2.3 Legislation

By means of the questionnaire, the legislation that grants the authorities the powers with regard to the marine environment was identified. An overview of the legislation is included in Appendix 1.

Most respondents were of the opinion that the legislation is not sufficient to protect the marine environment. Some opinions about this were as stated below:

- The legislation is outdated. Some shortcomings in the current legislation are a lack of structure, fragmented powers and a lack of coordination, a lack of policy and legislation specifically aimed at the marine environment, a lack of deployment of existing mechanisms, the amounts of the fines being outdated and the lack of a legal status of the management plans for the special management areas.
- Renewal or (as the case may be) revision of the current nature conservation legislation is necessary. The procedure to establish protected areas is an outdated top-down approach because the government is not legally obliged to involve stakeholders in the designation and establishment of protected areas.
- Due to the lack of environmental legislation, there are no norms and standards with regard to pollution. Environmental Impact studies are not required by law either, but are conducted on a voluntary basis, particularly in the marine area.

2.2.4 Institutes

The institutes that play an important role in marine environment management are:

- the Maritime Authority Suriname
- the Coast Guard
- NIMOS
- The Ministry of Agriculture, Animal Husbandry and Fisheries: Fisheries Department
- The NCCR

- The Ministry of Spatial Planning, Land and Forest Management: Nature Management Department
- The Ministry of Natural Resources: GMD Department
- Staatsolie Maatschappij Suriname N.V. [Suriname State Oil Company]

As regards the capacity to protect the marine environment, the institutes are not able to perform this optimally. Aspects that play a role include:

1. The shortage of manpower and if such is available, it is not enabled to carry out its work in the right manner;

- 2. Lack of resources and infrastructure;
- 3. Lack of finances.

4. Although there is some degree of information about the marine area available at certain ministries and organizations, it appears that in general there is insufficient knowledge about this among the wider public and therefore this area is also undervalued.

5. The great distance between Paramaribo where the government is seated and the area.

2.2.5 Priority Areas Marine Territories for Protection or Conservation

With regard to the establishment of 10% protection of the coastal and marine areas, the authorities were asked to indicate priority areas for the protection of the marine environment. Due to the fact that protection of the marine environment does not enjoy specific attention within government policy, priorities for marine protection had not been considered previously either. Despite the fact that no exact areas can be designated, the following opinions were given:

- 1. Before an area may be designated as a protected area, this area must first be biologically and ecologically attractive, meaning that a study must first be conducted of the marine area.
- 2. Priority area depends on the type of protection that will be implemented.
- 3. For the fishing sector it is interesting what kind of fish that area can produce. The protection will depend on the species that occur in a certain area.
- 4. In the Fisheries Management Plan for Suriname 2014-2018, a number of zones have been indicated. Zone 1 has been identified as a breeding zone where no trawler activities may take place. This may be seen as a priority area.

- 5. The coastal zone deserves a high priority of protection due to the activities taking place there (sand excavation, oil extraction activities and deforestation). This area is important for, among other things:
 - a. occurrence of wetlands (high biodiversity)
 - b. breeding ground ['nursery'] (important for fishing)
 - c. preservation of mangrove forests (natural seawall)

3 Analysis of Marine Biodiversity Management in Suriname

3.1 Institutional framework

The management of biodiversity is the responsibility of various ministries. The Head of the National Forest Management Department of the Ministry of Spatial Planning, Land and Forest Management (RGB) is in charge of the general management of the protected areas, while the daily activities with regard to wildlife management and nature conservation are carried out by the Nature Management Department. The Foundation for Forest Management and Production Control is responsible for timber exploitation. The Ministry of RGB is also responsible for spatial planning as well as for the issue of land.

However, by virtue of the Task Definition Departments State Decree, several ministries have responsibilities that relate to the protection of biodiversity and ecosystems. The Ministry of Agriculture, Animal Husbandry and Fisheries (LVV) is inter alia responsible for the protection of fish stocks and the Ministry of Natural Resources (NH) is responsible for regulating the exploitation of minerals and drinking water supply. The Ministry of Public Works (OW) is inter alia responsible for the infrastructural works for the protection of the coastal area.

The Environment Coordination Unit within the President's Office is responsible for coordinating the preparation of the Environmental Policy. In this context, it is the focal point of the Biodiversity Convention. The NIMOS is the technical operating unit of the President's Office. The Maritime Authority Suriname (MAS) and the Coast Guard play an important role in the protection of the Marine area. The MAS is a focal point for a number of conventions on sea pollution control, while the Coast Guard is responsible for enforcing the legislation in the Marine area.

Appendix 4 contains a table with the ministries and government bodies involved in the exploitation and management of the marine area.

3.2 Policy framework

The Government Policy is reflected in a number of policy documents. The overarching document is the Development Plan. The development plan has a constitutional basis and indicates the direction of the socio-economic development for 5 years. At the time of performing the gap analysis, the OP 2017-2021 had not yet been approved, which means that the OP 2012-2016 is still valid until it has been replaced. In addition to the overarching Development Plan, the Biodiversity Strategy and the Action Plan are also important guiding policy documents.

This section will examine which policy has been devised to protect the coastal and marine ecosystems and to what extent such policy has been implemented.

3.2.1 National Biodiversity Strategy and Biodiversity Action Plan

The National Biodiversity Strategy (NBS) lays down the national vision, goals and strategic directions required to preserve and sustainably use the rich biodiversity and biological resources of the nation. Furthermore, the promotion of sustainable management of its natural resources and the support of the fair distribution of the natural resources. The NBS was prepared and approved in 2006 after study and consultation with stakeholders, including government agencies, international and donor institutions, NGOs, community-based organizations (CBOs) and private companies. The NBS constituted the basis for the formulation of the National Biodiversity Action Plan (NBAP). Despite the fact that the original term has expired, the NBAP is still in force. ³

Important goals that are included in the strategy and that are supportive in achieving the Aichi targets with regard to coastal and marine protection are:

- 1. **Conservation of Biodiversity**, in the course of which the Biodiversity will be conserved in Suriname by protecting and improving habitat and species at local, regional and national level. The strategic guidelines to that effect will be:
 - a. The management and conservation of wild species in their habitat
 - b. Strengthening research and monitoring programs
 - c. Monitoring exotic and invasive species
 - d. Protection of management areas

³ Talk with Mrs. M. Gompers and Mrs. Patterzon of the Environmental Coordination Unit within the Office of the President on June 7, 2017.

e. Strengthening policy and legal mandates to protect species and habitats

2. In order to implement the above, the NBAP specifically states that:

a. National laws and regulations for the conservation of biodiversity within and outside protected areas will be adapted;

b. The update of or adjustment to management plans for nature reserves and vulnerable species;

c. The existing protected areas will be effectively managed;

d. EIAs will be conducted for the establishment of new protected areas;

e. New protected areas will be established;

f. Implementation of a coastal management plan.

3. **Sustainable use of biological resources** in the course of which sustainable use and management of marine resources are indicated as one of the strategic guidelines. The relevant actions covered by this directive are:

a. using the results from research in the field of sustainable use and harvesting resources to improve the management and protection of marine resources in the Exclusive Economic Zone (EEZ).

b. promoting and increasing the knowledge of fishermen and other stakeholders in the sustainable use of marine resources through education, training and technology transfer.

c. Implementing the Integrated Coastal Zone Management Plan through relevant agencies, local communities and organizations engaged in conservation.

d. local and regional cooperation to ensure effective monitoring and

enforcement of conservation rules and management programs for fisheries.

e. participating in regional and global initiatives on the management of marine biological resources and seeking financial and technical assistance to increase capacity to manage these resources.

f. promoting the awareness of the impact of land activities on marine biodiversity.

g. The NBAP specifically states that sustainable fishing in the marine, estuarine and inland waters can be achieved by adapting the fisheries policy for more sustainability. An evaluation of fishing at sea and the estuarine zone will have to be conducted as regards the sustainability function.

- 4. **Improvement of management capacity** of the natural resources, which will improve institutional capacity to sustainably manage and monitor biodiversity. The strategic guidelines for target 5 are indicated as follows:
 - a. Institutional Strengthening
 - b. Training and Skill Development
 - c. Data Collection and Management
 - d. Monitoring and Enforcement
- 5. Public Awareness, Education and Strengthening Communities, in the course of which educational and communication opportunities are strengthened to raise public awareness of biodiversity, cultural and nature conservation planning, management and monitoring at local and national level. The strategic guidelines for this objective are indicated as follows:
 - a. Increase awareness of risks, threats and opportunities for biodiversity and cultural preservation at local level through extensive, multilingual awareness-raising campaigns adapted to the local language.
 - b. Involve the importance of conservation and sustainable use of biological and cultural resources in educational programs at all levels of the education system.

3.2.2 Development Plan 2012-2016

The 2012-2016 Development Plan lays down that legislation, monitoring and research play an important role in achieving policy goals linked to policy areas. With regard to the legislation, the OP indicates that the Environmental Act, the Fisheries Act, the Aquaculture Act and the Spatial Planning Act are still to be formulated and finalized. Furthermore, attention will also be paid to the revision of the Hunting Act and the Nature Conservation Act. As regards monitoring, the policy indicates the need to focus on and conduct research and the publication of environmentally-related research.

Some priorities identified for that policy period were:

- approval of the Environmental Framework Act by DNA with the important goal of making Environmental (Social) Impact Assessments obligatory with the planning;
 review of the outdated nature conservation legislation;
 - 15

institutional strengthening for LBB / Nature Management to guarantee the management of protected areas, game and endangered species;

The fishing industry is an important source of income and therefore occupies an important place in the Government's policy. However, this sector suffers from some problems such as sharp decline in fish and shrimp catches, Illegal fishing and piracy and overfishing. The policy to be pursued is based on the sustainable exploitation of the fishing sector.

3.2.3 Policy Implementation

On the basis of what has been included in the various policy documents, it may be stated that the intentions to improve the protection of biodiversity are present. With regard to the protection of the Marine area, specific policy measures have been announced. The measures range from legislative improvement, institutional strengthening, education and awareness, to research and monitoring and enforcement improvement.

Research and interviews with government agencies show that few concrete results have been achieved. There has been no adapted or new legislation, institutions have not been strengthened, and because of a lack of finance, the goals seem less feasible and the priorities are not in the area of nature conservation.

3.2.4 Draft Development Plan 2017-2021

The Development Plan 2017-2021 has been presented to Parliament for consideration and approval. Depending on the Plan, a budget will be approved. In the context of achieving the Aichi targets in 2020, it is important to examine which policy measures have been announced for the coming years. The Development Plan 2017-2021 consists of four pillars. The fourth Pillar concerns Utilization and Protection of the Environment.

The planning is to formulate and adopt a strategy and action program in 2019, specifically aimed at the protection of biodiversity in Suriname. In the environmental strategy, the protection and management of nature reserves, parks and protected areas will enjoy the highest priority for biodiversity conservation. As a result of the limited capacity, Suriname is not able to effectively exercise control and supervision.

In the OP, specific attention has also been paid to the fisheries sector. By implementing the updated Fisheries Management Plan (VMP), a transition will be made to sustainable

exploitation of the fishing resources. The fisheries policy will, among other things, have to result in:

- the production of sea fishing companies, certified for the local and international market, further increasing, and a reduction of overfishing of the Surinamese fishing grounds because of the action of the fully operational Surinamese Coast Guard against illegal fishing.
- the feasibility study on shrimp deep-sea fishing having been carried out, the policy objectives having been formulated and the policy measures having been implemented.

In the OP, coastal and bank protection is also a priority that needs to be given more attention. In this respect, the emphasis will be on sustainable coastal protection and optimal water management. Conservation of the estuarine coastal strip is also a high priority, with natural vegetation being an important contributor to coastal protection. It is worth mentioning that the Coastal Protection Act has already been submitted to DNA.

3.3 Legal framework

By signing the Biodiversity Convention, Suriname has committed itself to having elevated parts of the terrestrial and inland waterways, and coastal and marine areas to protected areas by 2020 (Aichi target 11). The legal basis to establish protected areas in Suriname was already set in mid-last century with the entry into force of the Nature Conservation Act in 1954. This act regulates the designation of nature reserves. The Forest Management Act provides the possibility to designate forest as protected areas, namely special management areas and a nature park with each their own legal basis:

- 1. **Nature reserves;** these are areas designated as nature reserves by virtue of the Nature Conservation Act 1954 due to the varied nature and landscape beauty and / or the presence of flora, fauna and geological objects of an important scientific or cultural nature. Nature reserves include land and waters belonging to the State. It is forbidden to deliberately commit acts in a nature reserve that can cause damage. In addition, it is also forbidden to camp and make fire as well as to hunt and fish and to have a dog, a firearm or any hunting or catching device without a license from the Head of the National Forest Management.
- 2. **Specially protected forest:** this refers to permanent forest, which because of its location, the composition of flora and / or fauna or aesthetic value, has a special

scientific, educational, cultural or recreational function. The Explanatory Memorandum to the Forest Management Act lays down that areas where nature conservation interests represent a very special value must be designated as nature reserves pursuant to the Nature Conservation Act 1954. Protection forest is a permanent forest that, due to its location, has an important stabilizing influence on the natural environment, in particular on the soil and water management. Mangrove forests could be designated as protection forests.

- 3. **Special management areas (also called MUMAs);** by means of Ministerial Decrees, areas in the estuarine zone with a special ecological value are placed at the disposal of the Ministry of RGB with the aim of managing these areas in a rational manner.
- 4. **A nature park;** Suriname has a nature park, specifically the Brownsberg nature park, which has been issued to Stinasu under a leasehold by virtue of the Agrarian Act.

Protection of the fauna is regulated in the Hunting Act and the Hunting Decree. These laws contain provisions for the protection of the fauna and for the regulation of hunting. Article 12 of the Hunting Act stipulates that it is forbidden to hunt in nature reserves. The current hunting legislation provides sufficient protective provisions for mammals, birds and sea turtle species. The hunting decree contains lists of protected animal species, hunting game, caged animal species (reptiles, amphibians and invertebrates) and harmful animal species. The hunting legislation applies to the entire territory of Suriname, including the territorial sea, the EEZ and the continental shelf.

Protected Areas

Analysis⁴ has shown that the current nature conservation act has many shortcomings and no longer meets the current demands to meet the challenges associated with nature conservation. Transparent procedures and criteria to establish protected areas are lacking, stakeholder involvement and legal protection are not regulated and environmental impact reporting is not mandatory. The four MUMA areas, which are all located in the estuarine zone, are limited only to the geographical boundary of the area. The decrees expressly state that the areas issued before the date of entry into force of the decree do not form part of the area made available. As a result, enforcement causes problems because it is not a contiguous area. In practice, the management of the protected areas leaves a lot to be desired, partly because of the inadequate capacity and the limitations of the legal status of the areas.

⁴ Adjustment Nature Conservation Legislation in Suriname Report, March 2016, Nancy del Prado.

The current management structure for protected areas happens to be based on a system whereby the central government is in charge of the decision-making. For the time being, there are no formal institutional mechanisms that regulate the involvement of stakeholders in the management of these areas. It is worth noting that the Coppename Estuary Nature Reserve has been designated as a RAMSAR and a Western Hemisphere site. Preparations are now being made by the government to also declare the Coronie Freshwater Swamp as a protected area.

Fisheries

In accordance with Aichi target 6, in the year 2020 stocks of fish and invertebrates and aquatic plants will be sustainably managed and legally harvested. An important statutory regulation that is relevant to the fishing sector is the 1980 Sea Fisheries Act. This Act aims at sustainably managing Suriname's fishing zone. The fishing zone is meant to refer to the territorial waters of the Republic of Suriname, the adjacent economic zone (EEZ) and the continental shelf. The addition of the continental shelf to the fishing zone was effectuated with the entry into force of the Maritime Zones Act of 2017. The practical importance of this lies in the fact that the continental shelf of Suriname extends beyond the exclusive economic zone of Suriname. Each coastal State has sovereign rights under Article 77 (4) of UNCLOS for the exploration and exploitation of living organisms belonging to sedentary species.

On the continental shelf, Suriname has sovereign rights for the exploration and exploitation of the natural resources of the shelf, including the living organisms belonging to the sedentary species, i.e. organisms that may be harvested when at the time of harvesting, they are immobile on or under the seabed, or not able to move, other than in constant physical contact with the seabed or the subsoil.

A permit is required to practice offshore fishing. The general conditions set out in the permit include inter alia the permitted catches and trapping methods, the mesh sizes, the seasons as well as the areas in which fishing may be carried out, the minimum sizes and quantities of the fish to be caught and the method of reporting the fish catches. The Fish Stock Protection Act only applies to the inland waters of Suriname, which includes the coastal area. In 2008, it was determined by ministerial decree that every license holder of a fishing vessel is obliged to install on the vessel, a tracking system based on the Argos satellite navigation network system. The VMS system permanently and automatically provides data, including identification data, geographical position, speed and course of the fishing vessel. When it is established that fishing activities are being carried out in prohibited zones, the penalty provision applies. This may be subject to imprisonment not exceeding 3 years and a fine. The VMS system is not yet used by all fishing vessels. The Venezuelan boats and the SK fleet do not yet use this system and the Ministry of LVV's ambition is to make VMS mandatory to all vessels operating in Surinamese waters.

The current fisheries legislation is outdated and needs to be renewed. The Ministry of LVV has in recent years worked on developing new legislation that will replace the existing fishing laws. The draft Fisheries Act will have to ensure the sustainable management of fish stocks in the Exclusive Economic Zone (EEZ) of Suriname, as well as increasing the possibilities for Suriname to fish sustainably in the high seas, taking into account the rules of the relevant Regional Organizations for Fish Stocks Management (ROVBs). Furthermore, the new draft law offers the possibility for stakeholders in the fisheries sector to effectively participate in the decision-making within the sector. Another priority in the new legislation is the better and more effective approach to illegal, unreported and unregulated fishing (IUU) in Suriname 's EEZ and beyond, through stricter sanctions and increased fines for IUU fishing. In the draft legislation, attention is also paid to the designation of special fisheries management areas. By decree, every area within the Surinamese waters may be declared a special fisheries management area with the aim of managing and protecting certain species or for exclusive use to be further determined.

It also includes that zones within the Surinamese waters may be designated to protect specific fish species, habitats or ecosystems. The legislation provides for better cooperation between the fisheries service, the Coast Guard, the Maritime Authority Suriname, Nature Management and other relevant services. The law is prepared in draft and will enter the process of formalization after consultations with stakeholders.

Natural Resources

The State of Suriname has exclusive rights for the reconnaissance, exploration, exploitation, preservation and management of the minerals on the seabed, in the subsoil thereof and in the above-lying waters. In the EEZ and the continental shelf, the State has sovereign rights for the exploration, exploitation, conservation and management of the natural resources, both living and non-living, of the seabed and its subsoil and the above-lying waters. In the EEZ, the State has rights for other activities for the economic exploitation and exploration of the exclusive economic zone, such as generating energy from the water, the currents and the winds. In the EEZ and the continental shelf, the State may make provisions for the

construction and use of artificial islands, installations and facilities, marine scientific research and the protection and conservation of the marine environment.

The government's mining policy is aimed at promoting the research and exploitation of existing hydrocarbons under own management. For this reason, the *Staatsolie Maatschappij* Suriname N.V. was established in 1980, which, with due regard for the interests and wishes of the State, alone or with third parties, is charged with the activities concerning the research and extraction of petroleum deposits. To carry out this work, *Staatsolie Maatschappij* has been granted mining rights for on-shore and off-shore exploration and exploitation activities. The concession conditions include inter alia that the State-owned Company will take all reasonable measures in accordance with good oilfield practices to carry out the activities in a safe manner. The State-owned Company will also provide for a responsible system for water drainage and waste oil disposal as well as a safe way of finishing boreholes and wells before these are abandoned.

The Mining Decree (Article 4) also specifies the importance of carrying out mining activities in a responsible and efficient manner. In the process, consideration must be given to the safety and health of the community and the protection of ecosystems. However, there are no national guidelines with a legal status on how this should be done in practice. The decree on mining installations stipulates that sufficient measures must be taken for the installation of a mining installation in the interest of the safety of the employees and of the shipping industry. Placing a mining installation on or above the sea area must take place in such a way that no submarine cables or pipelines can be damaged. The removal of gases, liquids and solids from a mining installation must take place in accordance with the safe working requirements. It is also forbidden to discharge substances that are harmful to the environment into the sea or to throw them overboard. The concession holders send weekly monitoring reports to the NIMOS when carrying out their activities.

At the end of each activity, a final monitoring report is sent to the NIMOS for approval. NIMOS has been advocating for years to have an environmental impact assessment (MEA) conducted before an activity starts. An MEA is a study in which the potential effects of an activity are identified and measures are recommended to prevent or mitigate such effects. Due to the lack of the legal obligation to conduct an MEA, only multinationals conduct an MEA in Suriname on a voluntary basis. A draft environmental law has been prepared for more than ten years, which lays down rules for the protection and conservation of the environment, including MEA and rules for the prevention of environmental pollution; however, to this date, this draft has not yet been approved and has not yet entered into force.

Conclusion:

Based on the above analysis of the relevant legislation, the following conclusions may be drawn:

- 1. Fragmented and sectoral legislation; The legal framework for marine management consists of laws and regulations that are spread over the various sectors and therefore fall under the jurisdiction of various ministries. Part of the legislation is specifically focused on the marine area, while another part focuses on the regulation of a certain sector and sometimes contains specific provisions aimed at the marine environment. The goal of integration is hampered by a significant fragmentation of legislation and policies relating to the marine environment. This fragmentation of tasks and also the lack of coordination, capacity and financial resources at the Ministries are not conducive to efficient and effective management of already designated protected areas;
- 2. The lack of a holistic time-adapted legislation for the conservation and management of nature. At present, the current nature conservation act does provide for designating land including waters (read also marine areas) as nature reserves. However, this law of the 1950s does not comply with the current international principles and good practices for nature conservation. CI-Suriname and WWF have started the process for the formulation of a new modern framework law for nature conservation, which will also include provisions for establishing and managing other forms of nature conservation and management, including marine ecosystems.

3. The scope and substance of the current fisheries legislation.

The current fisheries legislation pertains to fish, which is widely defined but is essentially limited to only the marine fauna. Fish is defined as: fish and parts of fish, crustaceans and shellfish, as well as other animal and vegetable organisms which form part of the natural resources of the sea, with the exception of birds. Accordingly, non - living marine resources and the marine environment do not fall within the

scope of the current law. The fisheries legislation does not have a holistic approach as such and focuses more on the management of the harvest activities and not on the conservation of ecosystems. The current draft Fisheries Act does include provisions for the promotion of sustainable exploitation, sustainable use and the preservation of not only fish stocks but also ecosystems. Completion and approval of this draft fisheries act by the Ministry of LVV is therefore desirable.

4. Lack of the legal obligation to conduct an MEA for the extraction of natural resources. Due to the lack of a legal basis (Environmental Law), up to now MEAs have been conducted on a voluntary basis. NIMOS guides the MEA process on the basis of the MEA guidelines developed by it. It may be stated that the monitoring of the activities is still inadequate due to the lack of capacity (manpower and resources). In the marine area it is mainly the oil companies that have MEAs conducted for the seismic studies. NIMOS has an overview (including reports) of all MEA studies, which have been conducted in the marine area on the basis of its guidelines.

3.4 The Biodiversity convention and other related conventions

This section will focus on the international obligations that Suriname has assumed through the ratification of conventions. There are a few international conventions that aim at protecting and preserving elements of biodiversity. The Convention on Biodiversity (UN Convention on Biodiversity, UNCBD) came into force in 1993 and may be seen as the international convention that seeks to protect and conserve biodiversity as a whole. In addition, there are some other international and regional conventions that protect components of global biodiversity. Suriname has ratified a few thereof.

Although the focus is on the Biodiversity Convention and the implementation of the Aichi targets, it is important to emphasize the interaction between this convention and other (regional) conventions.

3.4.1 Relevant International Legal Framework

There are some international conventions that focus on the protection and conservation of the marine biodiversity and components to varying degrees. In doing so, use is made of multiple forms of approach, which are sometimes supportive but may sometimes also conflict. These include measures against pollution (MARPOL Convention, London Dumping), the protection of wetlands (Ramsar Convention), the conservation of endemic flora and fauna of the Western Hemisphere, the trade in wild animals and plants (CITES), climate change (UNFCCC) and whales (Whales Convention).

The Convention on Nature Conservation and Wildlife Protection in the Western Hemisphere aims at protecting all species and genus of American endemic flora and fauna from extinction and also at protecting areas with extraordinary beauty, striking geological formations or aesthetics and historical or scientific value. Within the framework of this convention, Suriname has established the Coppename River Estuary nature reserve. This nature reserve is an estuarine area and as such is part of the Surinamese marine environment, given the fact that river estuaries and the mangrove that grow there, fulfil a certain breeding ['nursery'] function.

The Ramsar Convention also concentrates around the coast, where it concerns the conservation and wise use of wetlands. In this respect the so-called wetlands, off our coast are concerned. Each party must declare part of its territory as a Ramsar site. This area is then placed on the Ramsar List of wetlands of international significance⁵. Suriname has the Coppename Estuary nature reserve on the Ramsar List with an area of 12,000 ha.

The goal of the CITES Convention is to regulate the trade in endangered plant and animal species in order to prevent the extinction of plant and animal species that are already threatened with extinction. The Convention has therefore introduced the system of quota lists, in the course of which each country may establish national quotas for the export of endemic endangered plant and animal species on the basis of the Annexes to the Convention.

The London Dumping Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter) specifically pertains to reducing and regulating dumping on the high seas by ships. The convention has a black and gray list of substances. The substances on the black list may not be dumped under any circumstances, while the gray list contains certain conditions where dumping is allowed.

MARPOL is the convention that deals with the prevention of pollution of the sea by shipping. This convention has 6 annexes that deal with the harmful substances within the shipping

⁵ Ramsar List of Wetlands of International Importance.

industry. By virtue of the convention and the annexes, the parties have the obligation to adopt national regulations and procedures that lay down that these harmful substances that enter the country via shipping are processed in a responsible manner. The aim of this convention is therefore to protect the sea and marine ecosystems in international and national waters.

UNFCCC is the international framework for combating the consequences of climate change. The convention has been further elaborated in the Kyoto Protocol and in 2016 the Paris Agreement came into effect, which must further implement the agreements made in the UNFCCC. Climate change and the oceans are linked and ocean acidification is an increasing problem. Furthermore, the rising temperature also has an adverse impact on the marine environment.

The relationship between UNCLOS and the Biodiversity Convention is often overlooked. The UNCLOS is the convention that governs the entire regime of international rules for the use, the property, etc. of the high seas. Part 12 of the Convention deals specifically with the protection and conservation of the marine environment, by laying down further rules on the use of the sea area outside national borders (the high seas) aimed at conservation and sustainable use of marine biodiversity. Making ecosystems resilient is of great importance for long-term sustainability, especially against climate change and acidification of the sea. Through the implementation of the aforementioned conventions, a contribution is made to

the protection of biodiversity and so also the Aichi targets.

A very important convention that would work in support of the specific Aichi targets in our marine area is the **Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Area**, better known as the **Cartagena Convention**. The Cartagena Convention requires Member States to take measures to prevent, control and mitigate the contamination of the Convention area. It concerns pollution by ships, by dumping, from the land, by seabed exploration or exploitation and also by atmospheric discharges under party jurisdiction. The convention also requires that all parties take measures to protect and preserve rare or vulnerable ecosystems and habitats. In addition, they are also required to develop technical and other guidelines for the planning and environmental impact assessments of major development projects. The convention is supported by three technical agreements or protocols. More in particular: oil pollution, specially protected areas and animals (SPAW) and sources of marine pollution originating

from the terrestrial area (LBS). Suriname is one of the few countries in the Caribbean that has not yet ratified the Convention and its protocols. The former Ministry of Labour, Technological Development and Environment had already made far-reaching preparations in the process of ratification. However, with the elimination of the Environment under this Ministry, it is now unclear what the next steps will be. It is recommended that the President's Office, which is now also in charge of the Environment, picks this up and continues to prepare for the ratification of the convention. Through ratification, Suriname can benefit from the support the convention offers for the protection of the Marine area.

3.4.2 The Biodiversity convention

The objective of the Biodiversity Convention is threefold. Firstly, it aims at preserving biodiversity, promoting sustainable use of components of biodiversity and lastly sharing in the benefits generated from the use of biological resources (benefit-sharing). This treaty covers all ecosystems, species and genetic resources. It links traditional conservation attempts with the economic goal by using biological sources sustainably.⁶

Some elements of the convention are that national strategies must be developed for the conservation and sustainable use of biological diversity, or to adapt existing strategies. Establishing a system of protected areas or areas in which special measures must be taken to preserve biological diversity. Each party should also respect, protect and preserve the knowledge, innovations and practices of indigenous and local communities if they are important for the conservation and sustainable use of biological resources must be part of national the decision-making. There is also an obligation to introduce an environmental impact assessment for intended projects that could have a considerable adverse impact on the biological diversity.

In 2002, the convention developed and adopted its first Strategic Plan. The aim is to have a more effective and coherent implementation of the three goals of the Convention, and in 2010 to have a significant reduction in the current level of biodiversity loss at global, regional and national level as a contribution to poverty reduction and for the benefit of all life on earth. Although the 2010 goals inspired action at many levels, the actions were not sufficient to reduce the pressure on biodiversity. Furthermore, there was insufficient integration of biodiversity into broader policy, strategy, programs and actions, as a result of which the

⁶ Environmentally-related Conventions ratified by Suriname, 2013, NIMOS. Page 49

underlying motives of biodiversity loss were not sufficiently reduced. Although the link between biodiversity, services that supply the ecosystems and the well-being of people is becoming increasingly clear, the value of biodiversity is still not reflected in the general policy.⁷

The conclusion was drawn that the 2010 Biodiversity Goals had not been reached.⁸ On the other hand, analyses have also been conducted in which various options have been identified, which can still cause a halt to the rapid loss of biodiversity. In 2010 at the tenth Conference of Parties (COP10), the parties prepared a strategic plan to encourage the implementation of the Biodiversity Convention. This strategy, called Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, aims at promoting the effective implementation of the convention through a strategic approach, consisting of a shared vision, mission and strategic goals and targets (the Aichi targets) ⁹. This Strategy provides a flexible framework to set national and regional targets.

During COP10 it was established that the only way in which positive outcomes can be achieved is by approaching the problem from different angles and by coming up with solutions. These different perspectives can also be found in the Strategic Plan in the 5 strategic goals:

a. Initiating actions to address the root causes of biodiversity loss;

b. Taking direct actions to reduce direct pressure on biodiversity;

c. Continuing actions to protect biodiversity and ecosystems, and restoring where necessary;d. Efforts to ensure the continued delivery of ecosystem services and access to these services, especially for the poor who are most dependent on them;

e. Improved support mechanisms for: capacity building; the generation, use and sharing of knowledge.¹⁰

These 5 strategic goals each contribute by addressing the approach to biodiversity protection based on the identified drivers of its threat.

⁷ UNEP/CBD/COP/DEC/X/2, 29 October 2010, Annex 1, paragraph 5.

⁸ UNEP/CBD/COP/DEC/X/2, 29 October 2010, Annex 1, paragraph 7.

⁹ Decision 2 Adopted by the Conference of Parties to the Convention on Biological Diversity at its Tenth Meeting, UNEP/CBD/COP/DEC/X/2, 29 October 2010, Annex 1, paragraph 1.

¹⁰ UNEP/CBD/COP/DEC/X/2, 29 October 2010, Annex 1

3.4.3 The Aichi Targets

The Strategic Plan contains goals that aim at achieving performance at the global level, as well as providing a flexible framework for setting regional and national objectives.¹¹ Parties have the opportunity to set their own goals, taking into account national needs and priorities. Not all countries have to formulate national goals for every global target. It may be that for certain countries certain goals have already been achieved, or that certain goals are not relevant for the country.

In the context of this research, the focus has been placed on five of the 20 targets, spread across the 5 Strategic targets. It concerns Aichi targets 4, 6, 10, 11 and 14. As indicated earlier, these targets are most relevant for Suriname.

Below an overview of these targets:

– Target 4:

"By 2020, at the latest, Governments, businesses and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of the use of natural resources well within safe ecological limits This target should be seen as the commitment of governments, the business community and stakeholders at all levels to take steps to bring resource use to a sustainable level." Target 4 falls under the first strategic goal and is therefore aimed at tackling the underlying causes of biodiversity loss. The target includes the commitment of governments, businesses and stakeholders at all levels to take the necessary steps to bring the consumption of resources to a sustainable level. This target specifically requires that plans for sustainable production and consumption have been made and implemented. It is not expected that sustainable production and consumption will be achieved in 2020, but that concrete steps have been taken in that direction. It is also necessary to ensure under this target that the influence of the use of natural resources remains within ecological limits. The limits will depend on the different ecosystems.

- Target 6: "By 2020 all stocks of fish and invertebrate animals and aquatic plants are managed and harvested sustainably and legally by applying an ecosystem-based approach, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and

¹¹ UNEP/CBD/COP/DEC/X/2, 29 October 2010, Annex 1, paragraph 13.

vulnerable ecosystems and the impacts of the fisheries sector on stocks, species and ecosystems are within safe ecological limits"

Target 6 falls under strategic Goal B and is therefore aimed at tackling the direct threats to biodiversity. The target refers to all fish and invertebrates and aquatic plants. It therefore applies to a number of marine biological resources such as fish, crustaceans, molluscs, and seaweed. There are some components associated with this target that need to be taken into account at national level. Firstly, stocks must be managed and captured sustainably and legally (harvested) and an 'ecosystem-based approach' must be used. Overfishing must be avoided. There are recovery plans and measures for all depleted species. The recovery plans serve those species that have already been depleted and are a possible first step towards recovery. Depending on the state of the fish stocks, there are various management options that can be applied. A final component of this target is that fisheries should not have any significant adverse impact on endangered species and vulnerable ecosystems. In addition to the direct threats to fish stocks, there could also be fishing techniques with an unintended adverse impact on other species, for example by-catch or damage to the habitat. Although this damage is not intentional, it could have major consequences for species and ecosystems. Ultimately, the aim is that the impact of fishing on stocks, species and ecosystems is within safe ecological limits.

This means that the pressure is at or below the level of what ecosystems can handle while still providing their services.

Target 10: "By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning."

Target 10 also falls within strategic goal B and is one of the targets with as target date 2015. Due to the far-reaching consequences of climate change and the acidification of the sea, there is a target date of 2015 in contrast to the earlier targets with a target date of 2020. This target has a number of components. Firstly, it has to do with climate change and its effects on the acidification of the sea. Due to the increased concentrations of carbon dioxide in the atmosphere, the seas are acidified. This acidification means that coral and other vulnerable ecosystems may be adversely affected by acidification. Furthermore, there are several other anthropogenic threats besides climate change and the acidification of the sea. In this respect pollution caused by terrestrial sources could come to mind. - Target 11: "By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes"

Target 11 is aimed at increasing and improving the existing protected areas. It falls under strategic goal C and is therefore more focused on the continuation of existing actions to protect areas. This target has specific percentages of land, inland waters, coastal and sea areas to be achieved in 2020. It concerns at least 17% of areas on land and inland waters and 10% of coastal and sea areas. These concern target values. It is therefore up to each country to determine what contribution it will make to the global percentages. In any case, the conserved area must increase, contain areas that are important for biodiversity and ecosystem services, are representative of existing ecology and ecosystems, are effective and are fairly managed and properly connected to each other. In addition to nature reserves, the protected area may also include other protected areas that permit sustainable use. Areas protected by indigenous or local communities and private protected areas may also be counted as long as the conditions are met. Establishing national targets for target 11 depends entirely on national priorities. Given that Suriname has already protected 13% of its land surface in one way or another, the national priorities for this target could focus on protecting the marine environment.

- Target 14: "By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable."

Target 14 has a target date of 2020 and falls under strategic goal D. It is aimed at increasing the benefits of biodiversity and ecosystem services. So in this respect, ecosystems are concerned that provide essential services. Some ecosystems are directly linked to human well-being by providing essential services. This target requires that these ecosystems are restored and protected. This should include the needs of women, Indigenous and local communities, the poor and vulnerable. Everyone depends to a greater or lesser extent on the services that our ecosystems offer. However, there are groups to whom this dependency extends further and they depend on these services for their daily survival.

4 National actions tested against Aichi targets

4.1 Introduction

In this chapter an analysis will be made of the concrete actions that the Surinamese government has carried out since the adoption of the Aichi targets in 2010. The information to that effect has been collected through interviews and the study of previously produced relevant reports. Given that the Aichi targets are formulated as international targets, it is important to keep in mind that the targets themselves must be 'translated' into national targets, which then all contribute to achieving the international targets. In order to be able to make the right translation from international to national targets that support the international agenda, it is important to have a good understanding of exactly what the Aichi targets imply. The Quick Guides to the Aichi Biodiversity Targets, developed by the CBD Secretariat and accessible via the CBD website, have been supportive in this respect. Each Guide contains an explanation of the specific target and actions to be taken to that effect. Furthermore it gives direction to setting national targets by giving some accompanying questions and indicates possible indicators that a country could use when analyzing its progress in achieving the Aichi targets.

4.2 Gaps, obstacles and proposed actions

As a result of the analysis of the measures taken by the Surinamese government and the actions mentioned by the CBD to achieve the Aichi targets, a number of gaps and obstacles have been identified per target. If Suriname has to achieve the targets as set internationally, there are a few actions that need to be taken. By comparing the identified gaps and obstacles to the prescribed actions, it is possible to determine which actions Suriname should take for each target.

In this section the gaps and obstacles have been identified for achieving the Aichi targets.

 Table 1 Identification of gaps and obstacles to achieve the Aichi targets.

TARGET 4: By 2020, at the latest, Governments, businesses and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of the use of natural resources well within safe ecological limits

Measures of Suriname (5 th National Report/	Gaps / Obstacles	Proposed actions
interviews with stakeholders)		
 While a start has been made on increasing awareness for sustainable production and consumption, much remains to be done to achieve this target The draft Environmental Act has already been prepared The 2014-2018 Fisheries Management Plan has already been formulated since 2013 on an ecosystem-based approach; The current and future policies include measures and actions to protect biodiversity The environmental policy plan which will be published in 2018, will include aspects relating to the protection of the marine environment as well as sustainable use In accordance with CITES, Suriname has drawn up a quota list for the trade in endangered species. Seabob Industry of Suriname is the first tropical shrimp fishery in the world, certified by the Marine Stewardship Council 	 Lack of Coastal Protection Act Lack of awareness about Aichi targets and protection of marine environment Adoption Draft Environmental Act has been a challenge for years Due to the lack of legal status of the Fisheries Management Plan, the implementation is not done in an adequate manner Lack of policy for the valuation of ecosystem services Although the protection of biodiversity is included in policy, implementation is inadequate 	 Approval and implementation of the Coastal Protection Act Development and implementation of an Awareness Strategy and Action Plan for sustainable production and consumption in Suriname. The use of resources must be within safe ecological limits Formulation of a strategy for the approval and implementation of the Environmental Act by NIMOS Granting legal status to the Fisheries Management Plan and implementation. Conducting research into the possibilities for valuing ecosystem services Strengthening institutions, making resources available and convincing policymakers of the need for protection

TARGET 6: By 2020 all stocks of fish and invertebrate animals and aquatic plants are managed and harvested sustainably and legally by applying an ecosystem-based approach, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of the fisheries sector on stocks, species and ecosystems are within safe ecological limits.

Measures of Suriname (5th National Report/	Gaps / Obstacles	Proposed actions
interviews with stakeholders)		
 Suriname's Fisheries Management Plan 2014-2018 has been drafted to manage the fish stocks of the sea There is a ministerial decision for the implementation of the Vessel Monitoring System (VMS); the VMS is based on the use of a GPS monitoring system for the monitoring of fishing and fishing activities at sea There is regulation for the use of Turtle Excluding Devices (TEDs) for trawling on seabob and large sea shrimp Seabob Industry of Suriname is the first tropical shrimp fishery in the world, certified by the Marine Stewardship Council Suriname is currently working on the Port State Measures Agreement. The main objective of the agreement is to prevent, abolish and eliminate illegal, unreported and unregulated (IUU) fishing through the implementation of strict port State measures 	 The current fisheries legislation is outdated and the adoption of the draft Fisheries Act may be a challenge The VMS system is not yet applicable to all fishing vessels and the use of the VMS system is bypassed by fishermen Overfishing of Surinamese fishing grounds because too many licenses are issued and illegal fishing and piracy put extra pressure on overfishing The Coast Guard is not fully operational and cannot adequately protect fishing grounds. Insufficient R & D in the fishing industry resulting in a lack of statistics and analyses to formulate proper policy for the fishing sector. 	 Formulating a strategy for the approval and implementation of the Fisheries Act by LVV Improving the supervision and monitoring of the use of the VMS system Evaluating and revising the licensing policy and intensifying the monitoring of compliance Strengthening the Coast Guard by providing the necessary means to perform their work properly and providing technical support (training, knowledge transfer etc.) Drafting and conducting an annual research program to support the policy

TARGET 6: By 2020 all stocks of fish and invertebrate animals and aquatic plants are managed and harvested sustainably and legally by applying an ecosystem-based approach, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of the fisheries sector on stocks, species and ecosystems are within safe ecological limits.

Measures of Suriname (5 th National Report/	Gaps / Obstacles	Proposed actions
interviews with stakeholders)		
- The Ministry of LVV has prepared in draft a		
Fisheries Act to replace the current fisheries		
legislation and to incorporate an ecosystem		
approach		
- Projects carried out by LVV to reduce by-		
catches:		
- The REBYC 1 (Reduce ByCatch) project of the		
Ministry of LVV, Fisheries Department		
- The REBYC 2 project which is now underway		
from the Ministry of LVV Fisheries Department		
by GEF		
- A National Oil Spill Contingency Plan (NOSCP)		
has been formulated and approved		

TARGET 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or	00000
TARGET 10; BY 2015, The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change of	ocean
acidification are minimized, so as to maintain their integrity and functioning.	
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Measures of Suriname (5 th National Report/	Gaps / Obstacles	Proposed actions
interviews with stakeholders)		
 Research is conducted in the ecosystems of inland waters and on land All offshore contractors are obliged by <i>Staatsolie</i> to conduct an ESIA and get this approved before they start their activities. This puts the country in a favourable position to obtain data from marine ecosystems Through collaboration among the Coastguard, the Ministry of Agriculture, Animal Husbandry and Fisheries, the NIMOS and the Anton de Kom University of Suriname, data are collected from industrial fishing companies. Accordingly, Suriname is in the process of developing a plan for collecting existing marine off-shore data REDD+: Suriname's actions to contribute to international efforts to reduce greenhouse gas emissions Projects pertaining to climate change: Mangrove project funded by Suriname Conservation Foundation Project "Suriname Global Climate Change 	 Annex 6 of the MARPOL Convention provides guidelines for the prevention of greenhouse gas emissions from ships and has not been ratified by Suriname Suriname has not ratified the 2015 Paris Agreement Suriname has not yet ratified the Cartagena Convention and related protocols No adequate legislation and regulations are available to prevent pollution of the territorial waters (both from the sea and from the land) Up to now it has not been proven that coral reefs are present in the territorial waters of Suriname, no scientific research has been conducted to that effect Due to limited financial resources and capacity, research is currently only taking place on inland waters and terrestrial ecosystems Conducting ESIAs is not required by law 	 Performing a legal and institutional analysis of Annex 6 MARPOL and Paris Agreement and the ratification thereof Conducting a baseline study for the marine area (including the presence of coral reefs) Making it legally mandatory to conduct ESIAs Formulating a strategy for the approval and implementation of the Coastal Protection Act. Research into the importance of the Cartagena Convention for Suriname and recommendations for possible ratification

TARGET 10: By 2015, the multiple anthropogenic	pressures on coral reefs, and other vulnerable	ecosystems impacted by climate change or ocean
acidification are minimized, so as to maintain their integrity and functioning.		
Measures of Suriname (5 th National Report/	Gaps / Obstacles	Proposed actions
interviews with stakeholders)		
Alliance" by UNDP Suriname		

TARGET 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes

Actions of Suriname (5 th National Report/	Gaps / Obstacles	Proposed actions
interviews with stakeholders)		
 13% of Suriname's land surface has been declared a protected area, which belongs to different types of protection forms (nature reserves, MUMAs, Nature Park) Suriname has one site in the coastal area, the Coppename Estuary Nature Reserve, which is both a RAMSAR and a Western Hemisphere site. Management and monitoring plans have been prepared for the CSNR and the MUMAs. Suriname has started the process for reviewing nature conservation legislation for Suriname. Zone 1 has been indicated as a breeding zone in the Fisheries Management Plan. No trawler activities may take place in this zone A no-fishing zone has been established in Galibi. A draft Coastal Protection Act has been prepared and submitted to Parliament. 	 Effective management of the protected areas is lacking due to, among other things, lack of manpower and resources. The MUMAs have a weak legal status. 	 Deploying local communities in the effective management of protected areas. Incorporating MUMAs as a form of protection in the new Nature Conservation Act. Research into the feasibility of developing a new framework for the protection of oceans including marine protected areas within a wider maritime spatial planning framework - which provides direction to implement maritime spatial planning under national legislation and policies, as well as existing planning regimes

TARGET 14: By 2020, ecosystems that provide esser are restored and safeguarded, taking into account t Actions of Suriname (5 th National Report/ interviews with stakeholders)		
 The Suriname Coastal Zone Protected Area Management project aims at improving the management of the protected coastal areas. Actions are being taken by the government to protect the Coronie freshwater swamp in the district of Coronie 4 MUMAs have already been established Actions to restore the mangrove forests, such as the planting of Mangroves in Coronie and the salt marsh projects along 'Weg naar Zee' 	 The 10% of marine protected areas has not yet been reached. There is currently no legal obligation to involve stakeholders in decision-making pertaining to protected areas. Rules and procedures for the valuation of ecosystem services are lacking. 	 Starting up the process for identifying suitable protection area Developing legal procedures for involving stakeholders in decision-making pertaining to protected areas. Research into ecosystem services and strengthening the capacity to value ecosystem services. Including rules and procedures in legislation for the valuation of ecosystem services.

4.3 Implications of the Action Plan

The formulated Action Plan will have implications for Suriname in general. In this research, the focus is on the government and so it will also be specifically examined which positive and negative implications the implementation of the proposed action plan will have for the government. One of the biggest positive implications is that implementing the Action Plan will result in national policies and legislation that are in keeping with the Aichi targets and are based on an ecosystem approach. Negative implications are mainly focused on the financial and technical aspects of implementing the Action Plan. Many of the actions have already been included in the policy, the OP 2017-2021 or the NBAP, but the financing often depends on more than just the government budget. Consequently, the challenge concerns seeking and maintaining external financing. In addition, many of the actions are also aimed at strengthening and building capacity, which means that the government is currently unable to implement many of the actions that have been included.

4.4 Establishing 10% Marine Protected Area

Although Aichi Target 11 is specifically aimed at coastal and marine areas, the present project aims at designating 10% of the EEZ as a protected area. In addition, the project assumes a baseline of 0%, which means that the current MUMAs and nature reserves in the coastal area are not included. From the legal analysis it becomes evident that Suriname has sovereign rights in the EEZ and the continental shelf with regard to the exploration, exploitation, and preservation and management of natural resources. In addition, Suriname has the jurisdiction in the area as regards scientific research and protection and preservation of the marine environment. These rights must be exercised with due observance of international law.

Despite the fact that Suriname owns rights within the EEZ that make it possible to perform acts of management (in this case, environmental protection), the legal analysis shows that the current legislation is not sufficient. The Nature Conservation Act does provide the possibility to designate terrestrial waters as a nature reserve, but the whole scope of the law is out of date and does not meet the current requirements for the management of protected areas. In addition, the legal construction to establish MUMAs also provides little power. It would not be advisable to protect areas within the EEZ in accordance with current legislation and regulations. It is imperative that Suriname adjusts its nature conservation legislation to

the current spirit of the times within short. Initiatives have already been initiated for evaluating and reviewing the legislation¹² and, at the earliest, in August 2018 the draft legislation could be submitted for consideration by Parliament.

At this stage it is not yet possible to indicate in what manner marine protected areas will be part of the new nature conservation legislation to be formulated. There are several options for the configuration of the legal framework for marine protected areas:

1. Laws or regulations for marine protection are linked to a framework law for nature protection;

2. A framework law for marine protected areas will be formulated with the possibility to designate protected areas in implementing regulations; or

3. Separate legislation for the protection of each marine area.

With each of these options, marine spatial planning will be an important aspect. In any case, IUCN¹³ advises that whichever option is chosen, it is essential that a link is made with the effective nature conservation legislation.

Legal instruments and techniques for the conservation of marine biodiversity are generally much less advanced than for terrestrial environments. This is because science about the functioning of marine ecosystems is relatively young and as a result the experience with policy and legislation in this area is relatively new. In many countries the framework for this purpose is still fragmented and not well attuned to the special threats, scientific knowledge and management challenges. Only few countries have legislation that fully meets modern MPA needs.¹⁴

In anticipation of the adoption of legislation and the formal establishment of a protected area in the EEZ, a baseline of the marine area will first have to be performed. Extensive stakeholder engagement will be necessary, which among other things discusses and makes decisions about the management objectives, institutional structure and other aspects relevant to management. It is also advisable to look for examples / good practices in the region or elsewhere in the world.

¹² In support of the Surinamese government, CI-Suriname and WWF Guianas recently started a project to review the current nature conservation legislation.

¹³ IUCN, Guidelines for Protected Areas Legislation 2011, pg. 243,

¹⁴ lbid, pg 209

References

- Advisory report adjustment nature conservation legislation in Suriname, Nancy del Prado, 2016
- A legislative review to draft CITES implementation legislation for Suriname, Nancy del Prado, 2013
- Decision X/2, Adopted by the Conference of Parties to the Convention on Biological Diversity at its Tenth Meeting, UNEP/CBD/COP/DEC/X/2, 29 October 2010 (<u>https://www.cbd.int/decisions/cop/?m=cop-10</u>, Visited on May 31, 2017)
- Environmentally-related Conventions ratified by Suriname, 2013, NIMOS.
- Environmentally-related Conventions ratified by Suriname, 2004, NIMOS
- Development Plan 2012-2016, Suriname in transformation, 2012
- Development Plan 2017-2021 (draft), 2017
- Quick Guide to the Aichi Biodiversity Targets, UNEP (https://www.cbd.int/nbsap/training/quick-guides/. Visited on May 31, 2017)
- Suriname Coastal Protected Area Management Project, Legal Report, Nancy del Prado, 2013
- Suriname Coastal Protected Area Management Project, Consultation Commission for special management areas in Suriname, Nancy del Prado, 2015
- Suriname Fifth National Report to the United Nations Convention on Biological Diversity, Office of the President, 2015
- Suriname's National Biodiversity Action Plan (NBAP) 2012- 2016, Ministry of Labour, Technological Development and Environment, 2013
- Suriname's National Biodiversity Strategy, Ministry of Labour, Technological Development and Environment and NIMOS, 2006
- Fisheries Management Plan for Suriname 2014-2018, Under-Directorate Fisheries of the Ministry of Agriculture, Animal Husbandry and Fisheries , 2013
- White paper for the Subsector Fisheries 2012 -2016, Ministry of Agriculture, Animal Husbandry and Fisheries, 2011.

Appendix 1 Relevant legislation

SUSTAINABLE DEVELOPMENT	
Title	Relevant articles
Constitution of the Republic of Suriname	One of the State's social objectives is to develop the natural resources and thereby create conditions that are necessary to protect nature and preserve the ecological balance. (Art.6 a and g)
S.B. [Bulletin of Acts and Decrees] 1987 no 116 as	
amended by S.B 1992 no. 38	The natural resources are the property of the Nation and shall be used to promote economic, social and cultural development of the country. (Art. 41)
Planning Act G.B. [Bulletin of Acts and Decrees] 1973 no 89.	For the development of Suriname, a sustainable policy is being developed that is aimed, among other things, at maintaining natural resources, a healthy environment and spatially geared to population growth (Articles 2 and 7).
	The law also offers the possibility to designate special management areas, in the course of which management is regulated by law. This concerns areas that require special management because of the vulnerability.
	MARITIME ZONES / TERRITORIAL WATERS
Title	Relevant articles
Constitution of the Republic of Suriname	The vastness and boundaries of the territorial waters and the rights of Suriname to the continental shelf and the economic zone shall be established by law.
S.B 1987 no 116 as amended by S.B 1992 no. 38	(Art. 2 paragraph 3)
ACT of April 7, 2017, containing rules on the Maritime Zones of the Republic of Suriname and amendment to the Sea Fisheries Act 1980 and the Mining Decree (Wet Maritime Zones)	Suriname exercises sovereign rights over its land area and territorial sea (up to 12 nautical miles). Other states have the right of innocent passage with due observance of international law. (article 1)

S.B. 2017 no. 41	Article 7: The contiguous Zone is the area adjacent to and extending from the outer boundary of the territorial sea to a distance of 24 nautical miles from the baseline and in this area the State exercises control over compliance with the laws within the territory. In the contiguous zone, a permit is required for the removal of objects of an archaeological or historical nature (Articles 7 and 8)
	The Exclusive Economic Zone (EEZ) is the area adjacent to and extending from the outer boundary of the territorial sea to a distance of 200 nautical miles from the baseline. In this zone, the State has sovereign rights for the exploration, exploitation, preservation and management of the natural resources. In addition, they have jurisdiction for marine scientific research and protection and conservation of the marine environment. (Art. 9)
	It has been specifically regulated that a license is required to intentionally dispose of waste and other substances in the EEZ. The deliberate disposal of waste and other substances includes: a. deliberate disposal of waste or other substances from ships, aircraft, platforms or other artificial structures in the sea; b. the storage of waste or other substances in the seabed and the subsoil originating from ships, aircraft, platforms or other artificial structures in the sea; and d. the abandonment or on-site tilting of platforms or other artificial structures in the sea, for the sole purpose of deliberately discarding these.
	The Republic of Suriname has sovereign rights in the continental shelf for the exploration and exploitation of the natural resources of the plateau, including the living organisms belonging to the sedentary species, i.e. organisms that can be harvested at the time of harvesting, either being immovable on or under the seabed, or being unable to move, rather than in constant physical contact with the seabed or the subsoil. In addition, the State has jurisdiction over: (1) the creation and use of artificial islands, installations and structures; (2) marine scientific research;

	 (3) the protection and conservation of the marine environment. c. other rights and obligations stipulated in international law. (Article 15) A license is required to carry out activities in the continental shelf which are a violation of the sovereign rights (Art.16)
Draft ACT of containing general rules for the protection of the coastal area (Coastal Area Protection Act)	The coastal area extends inland from the six-meter depth line in the Atlantic Ocean to the area that must be subject to management due to the direct and significant impact on coastal waters and ecosystems, their vulnerability (due to natural disasters or sea level rise combined with human action). A map will be added, indicating the boundary of the protected coastal area. The boundaries of the protected coastal area may always be changed by state decree if there is reason to do so. This reason may arise after an inventory and investigation has been done of the entire coastal area of Suriname by the Coastal Area Management Authority. In this respect economic - and cultural aspects and the natural characteristics are concerned such as the depth measurements in the sea, topography, soil types, natural vegetation and land use, hydrology and climatology and climate changes. (Art.2)
	It has been specifically regulated that within the boundaries of the protected coastal area no rights, permission, license or concession shall be provided to third parties under any name whatsoever, irrespective of the basis for such provision in any other statutory regulation or administrative decree. An exception is made to this when that right, permission, permit or concession, is granted for the preservation of coastal and ecosystems, as well as in other cases to be so indicated by the President. To this end, the President must obtain prior permission from The National Assembly. (Article 3)
	There is a specific prohibition to dredge, excavate or remove silt, sand, rock, gravel or other material from the sea bed, river bed, lake or water area, bank or parts thereof within the boundaries of the protected coastal area. An exception is also made when this is done by or on behalf of a competent governmental authority for the protection of the coastal and ecosystems.

	(Art 6)
	The Minister of Spatial Planning, Land and Forest Management may by decree declare every part within the boundaries of the protected coastal area where specific measures are necessary for the protection of vulnerable ecosystems, habitats and animal and plant species to be a "Protected Area". (Art 7)
	This act establishes a Coastal Area Management Authority for the management of the coastal area of Suriname (Art.8)
	MANAGEMENT MARITIME AREA
Title	Relevant articles
Act containing rules on the establishment of the	The Coast Guard of Suriname, internationally known as the Suriname Coast Guard, has been
coast guard (Establishment Coast Guard Act)	 established and charged with supervisory investigation and service tasks, of inter alia ship crimes and violations of the fisheries legislation, the Economic Offences Act, the Act to counter smuggling, the Aliens Act and the Shipping Act The service tasks are: a. settlement of emergency, rush and safety traffic; b. assistance and emergency response, and c. other forms of service. (Art.2) The Coast Guard exercises its duties in the inland waters and the territorial waters of Suriname, as well as in the contiguous economic zone and the airspace above it. (Article 3)
Maritime Authority Act (MAS)	The MAS is to guarantee safe and efficient passage of seagoing vessels to and from Suriname and is also charged with supervising compliance with legal requirements of the shipping industry.
S.B. 1998 no. 37	 The Company is, among other things, in charge of: a. carrying out the work in the field of maritime services on a commercial and efficient basis in order to secure the delivery and transport of the import and the export; b. carrying out tasks assigned to shipping;

	c. supervising and guiding traffic on the Surinamese inland and coastal waters; d. supervising compliance with legal regulations regarding shipping; and e. certifying port facilities in accordance with the International Ship and Port Facility Security (ISPS) standards;
Port Sector Act 1981 (S.B. 1981 no. 86)	It is prohibited to throw ballast, waste materials and condemned goods in public waters. (Article 17)
	EXPLOITATION OF NATURAL RESOURCES
Title	Relevant articles
Decree of May 8, 1986, containing general rules on the exploration and exploitation of minerals Mining Decree S.B. 1986 no. 28 recently amended by S.B. 1997 no. 44.	 All minerals within the territory of the State of Suriname, including the territorial sea, its soil and subsoil belong to the State. All minerals in and on the ground are deemed to have been separated from the property of the land. In the economic zone and the continental shelf, the State of Suriname exercises exclusive sovereign rights in respect of reconnaissance of and exploration for, exploitation and maintenance, and management of minerals on the seabed, in the subsurface and in the above-located waters. By State Decree rules will be laid down for, inter alia: the establishment and use of artificial islands, installations and similar constructions; the protection of the marine environment, inclusive of taking measures against pollution; conducting scientific research and experiments; All other activities, aimed at efficient reconnaissance of, exploration for and exploitation of minerals in the economic zone and the continental shelf All mining activities shall be carried out in the most efficient way, taking into account the interests of the nation, the most modern international techniques and the generally accepted methods in the mining industry. Expert use shall be made of advanced technology with due observance of applicable safety and health standards for personnel in particular and the community at large, as well as standards for ecosystem protection. (Art.2) Upon the termination of a mining right, the holder shall, to the satisfaction of the Minister, take

	the necessary steps in order to respect public safety, conserve the deposit, rehabilitate the area and protect the environment (Art.16)
State Decree on Mining Installations S.B. 1989 no. 38	Chapter III, on protecting the environment, stipulates that it is forbidden to discharge into the sea or throw overboard, substances in concentrations that are harmful to humans, animals or the environment during work on a mining installation. When carrying out mining activities, effective measures must be taken to ensure that the marine environment of neighbouring coastal states is not contaminated and that ecosystems are not destroyed or otherwise damaged.
Act of March 6, 1991, containing rules on the exploration and exploitation of hydrocarbons Petroleum Act 1990 S.B. 1991 no. 7, recently amended by S.B. 2001 no. 58	When entering into petroleum agreements with third parties, State-owned companies shall ensure that the exploration and rational development of the petroleum deposits shall take place in the most effective manner and in accordance with the best international techniques and uses and that the adverse effects on the environment are prevented. (Art 6)
	By State Decree, further rules may be laid down for: (a) setting standards for petroleum and for its transport. b) preserving petroleum and preventing unnecessary waste. c) protecting fishing, shipping and other activities within or near the areas where petroleum operations are carried out. (article 28)
Act of December 7, 1972, for the regulation of the trade in and the use of pesticides (Pesticides Act) (G.B. 1972 no 151 as recently amended by S.B. 2005 no. 10.	Only pesticides allowed pursuant to the law may be sold, kept in stock or used. Pesticides may not have harmful side-effects on, inter alia, public health and the production capacity of the soil, plants or parts of plants, or animals if this damage is disproportionately high in relation to the intended purpose of the product.
State decree of March 3, 2005, providing for the implementation of article 13 of the Pesticides Act 1972 (G.B 192 no. 151, as amended by S.B 2005 no.	It is attempted to bind the destruction of packaging and residues of pesticides bind by rules in order to protect the environment,; the removal and destruction must in fact be carried out in such a way that it poses no danger to water extraction sites or surface water.

18 (Pesticides Decree 2005)	Tests with pesticides shall have to take place in such a way that this does not pose a risk of contamination of the environment, in particular surface water.
Draft act of, containing rules for sustainable Environmental management (Environment Act)	The activities that may have adverse effects on the environment and for which the Environmental Authority is authorized to request an environmental impact analysis shall be laid down by state decree. (Article 21)
	The Environmental Authority will designate contaminants that may cause damage to human health or affect the environment (Art 23): The Environmental Authority will issue environmental permits for the dumping or release or emission of a contaminant on or in the soil, water or in the air. This will be subject to conditions (Article 25)
	Standards and procedures for handling waste shall be established by decree. (Art.28)
	In the cases where Suriname is party to an international convention, the Environmental Authority will initiate legislative proposals in close collaboration with the relevant Ministries, with the aim of implementing ratified conventions and enabling the State of Suriname to fulfil its obligations and of identifying appropriate measures to implement ratified conventions. A register of all international environmental conventions, to which Suriname is a party, shall be kept in close collaboration with the Ministry of Foreign Affairs. (Art.30)
	PROTECTED AREAS
Title	Relevant articles
ACT of April 3, 1954, providing for the protection and	After the President has heard the Council of State, by decree land and waters belonging to the State
conservation of natural places of beauty in Suriname	may be designated as nature reserves. (Art.1)
S.B. <mark>195</mark> no. 80	In order to be designated as a nature reserve, an area must meet the following requirements: that it deserves protection from the government due to alternating nature and landscape beauty and / or by the presence of flora, fauna and geological objects of an important scientific or cultural

	nature. (art.2)
	The Head of the National Forest Management is in charge of the general management of nature reserves, who is advised for this purpose by the Nature Conservation Commission. (Art.4)
	It is forbidden in a nature reserve, either intentionally or through carelessness, to damage the condition of the soil, the natural beauty, the fauna, the flora or perform actions as a result of which the value of the reserve as such is impaired. It is forbidden to hunt in nature reserves. (Art.5)
Decrees of the Minister of Natural Resources, laying down provisions to make available to the Ministry of Natural Resources, the coastal area, respectively North Coronie, North Saramacca, North Commewijne / Marowijne and Bigi Pan. S.B. 2002 no. 87 S.B. 2002 no. 88	The coastal strip of these special management areas is important because they harbour, among other things, vast mangrove forests that are of great importance as natural seawall, whereas certain types of sea fish and sea shrimp spend their larva stages in the brackish water coastal area (nursery and production functions); is particularly rich in birds and serves as breeding ground for large coastal birds and as a feeding area for large numbers of migratory birds; offers opportunities for nature tourism and intensification of beekeeping.
S.B. 2002 no. 94	 The protection of the areas is (urgently) necessary due to, among other things: the obstruction of the freshwater supply to the mangrove forests by land reclamation of the area, which endangers the optimal functioning of the mangrove forests, with all its consequences; increased pollution of the brackish water swamps with agricultural chemicals, which seriously
	 threaten the nursery and production functions of the brackish coastal area; the economic disadvantage that arises after agricultural pesticides have penetrated food chains in shrimp, fish, poultry and game, making them unsuitable for local consumption and export.
Decree of the Minister of Spatial Planning, Land and Forest Management, providing for the establishment	The following general conditions apply to the issue of state-owned land in the estuarine management areas:
of directives for land issue in estuarine management areas	a. A strip of 500 meters of free state-owned land on both sides of the rivers and 200 meters on either side of large creeks in the estuarine management areas intended to be designated as

Land Issue Estuarine Management Areas Directives S.B. 2005 no. 16	 protection forest or specially protected forest (refer to Forest Act), is not available for issue; b. Extraction of water from the estuarine swamps is not permitted; c. Discharging water with residues of chemicals (pesticides, fertilizers and the like) in the estuarine swamps is not permitted. (Art 1)
ACT of September 18, 1992, providing for forest management, as well as forest exploitation and the primary timber processing sector Forest Management Act S.B. 1992 no. 80	 The Minister shall be responsible for the management of the forest, which is aimed at a rational use of the forest itself as a regenerating natural resource in the sense that: a. the stabilizing influence of the forest on the natural environment, in particular on the soil, water, flora and fauna, is not affected and that, in this way, the elementary natural requirements for the preservation of the quality of life in Suriname is secured; (Article 2). The forest may be classified in permanent forest, forest to be cut over once only, forest to be preserved temporarily (article 4). In the designation of permanent forest, a distinction may be made between permanent productive forest, protection forest and specially protected forest. (article 5). According to the definition, protection forest is permanent forest which, on account of its location, has an important stabilizing influence on the natural environment, in particular the soil and the soil hydrology; Specially protected forest is permanent forest which, on account of its location of its fauna and/or flora, or its aesthetic value, has a particular scientific, educational, cultural or recreational function; This regulation creates the possibility of designating mangrove forest as protection forest or specially protected forest due to its function.
Hunting Act G.B. 1954 no.25 as amended by S.B. 1997 no.33	This law contains provisions to protect the fauna and to regulate hunting. It is prohibited to capture, kill, trade in, import and export protected animals. This prohibition also applies to skins, feathers and other body parts of these animals.

	"Protected animal species" means all types of mammals, birds and sea turtles and other animal species to be designated by State Decree. Practicing hunting is allowed on land and waters belonging to State Land with the exception of nature reserves by virtue of the Nature Conservation Act. Practicing hunting within built-up areas is
	prohibited. (article 12) By State Decree the areas shall be designated to which this Act will apply in whole or in part (article 23).
Hunting Decree 2002 S.B. 2002 no. 116	The various appendices to this State Decree lay down the protected animal species, hunting game, caged animal species (reptiles, amphibians and invertebrates) and harmful animal species (article 2)
	The hunting of animal species belonging to hunting game and the cage animal species is permitted in certain periods of time; after hearing the Nature Conservation Commission, the Minister may set other rules for a certain year and for certain areas (article 3).
	The import, supply from the sea, transit and export of animals belonging to hunting game and to caged animal species, as well as their parts including eggs, is only allowed on conditions (article 7)
	The hunting [act] and the decree apply to the whole territory including the territorial sea and the economic zone
	There is a division in a northern and southern zone. (Article 8)
	FISHERIES
Title	Relevant articles
ACT of December 31, 1980, containing rules	The "fishing zone" is a zone that includes both the territorial sea, referred to and described in the

pertaining to offshore fishing	articles 1 and 2 of the Act, and the economic zone.				
(S.B. 1980 no. 144), recently amended by S.B. 2001 no. 120.	A permit from the Minister is required to operate in the offshore fishing industry. Foreign fishing vessels may only obtain a permit if there is an international agreement between Suriname and the State of registration. (Art.23)				
	By State Decree, rules may be laid down for the protection and conservation of the fish stocks:				
	1. a ban on fishing for a particular fish or fish species;				
	2. a ban on fishing during a certain period or on certain days, possibly distinguished according to fish or fish species;				
	3. a ban on using certain designated fishing methods or gears;				
	4. a ban on catching fish below a certain minimum size;				
	5. a ban on catching fish on certain fishing grounds;				
	6. a ban on catching fish above a certain maximum quantity, possibly distinguished according to fish or fish species.				
	Where possible, the rules shall be printed on the back of the permit.				
	Fishing in the fishing zone without a valid license, fishing with a fishing vessel in the fishing zone or allowing fishing in the fishing zone without a valid license with his fishing vessel is liable to imprisonment not exceeding six years or a fine (Article 27).				
ACT of March 25, 1961 for the protection of the fish stock Fish Stock Protection Act	This act applies to the inland waters. In the interest of the protection of the fish stocks, the Minister may lay down regulations concerning numbers, species and open and closed seasons. (Art 4)				
	It is forbidden:				
S.B. 1981 No. 66.	(a) to buy, exchange, accept, present, sell, deliver or transport fish under the measure determined by or pursuant to State Decree;				
	(b) destroy, displace, remove, buy, sell, supply, transport, have, and have in stock, or have for sale or on delivery, eggs or egg nests of fish species;				

	(c) to buy, exchange, accept, sell, deliver, transport, or to sell during the closed period of time prescribed by or pursuant to the State Decree, fish, or to have in one's possession such fish for sale or delivery or four days after the beginning, until the end of such time for any other reason. (Art 5)				
VMS-decree of January 30, 2008 no. 581 (S.B. 2008 no. 45)	Every license holder is obliged, as regards a vessel eligible under the license conditions, to install on the relevant fishing vessel, a tracking system based on the Argos satellite navigation network system. (Art 3)				

Appendix 2 List of stakeholders interviewed

Agency/Authority	Name	Job title		
MAS	Mrs. C. Krommie			
Coast Guard	Colonel J. Slijngaard	Managing Director		
NIMOS	Mrs. G Griffith	Legal Advisor		
Ministry of ROGB, Nature	Mr. Q. Tjon Akon	Field Officer		
Management Department		Office of Environmental and		
		Social Assessment		
	Mrs. A. Soetotaroeno	Field Officer		
		Office of Environmental and		
		Social Assessment		
	Mrs. C. Sakimin	Head		
Ministry of Natural	Mr. D. Abeleven	Permanent Secretary		
Resources				
Ministry of LVV, Fisheries	Mrs. P. Amritpersad	Head Monitoring and		
Department		Inspection		
	Mrs. Y. Babb- Echteld	Sr. Policy Officer		
	Mr. A. Chotkan	Government Veterinarian		
	Mr. M. Yspol	Head Statistics and Research		
		Department		
	Mr. Z. Arjun	Sr. Policy Officer		
Office of the President	Mrs. M. Gompers	Policy Officer		
	Mrs. I. Patterzon	Policy Officer		

Appendix 3 Questionnaire

Name & job title:	
GENERAL	
What importance do you attach to the protection of Marine Biodiversity and Ecosystems?	
What threats is Suriname faced with?	
Are you familiar with the Aichi Targets?	
INSTITUTIONAL	
What relationship does your organization have regarding the Marine Environment?	
1. Management / Protection	
2. User	
Are you a threat, if so how? If not, why not?	
Which legislation gives you powers in relation to the marine environment?	
Does the legislation provide sufficient tools?	
If not, what would you add / amend to the legislation?	
Which institutes play an important role in the management of the marine environment? Do the institutes have the capacity to protect the marine environment? (Human resources, tools /equipment / funds)	

POLICY

Is there a policy on the marine environment, are you familiar with it?

Have the objectives been achieved?

What are the strengths and what are the weaknesses of the policy?

What improvements do you propose / What should be the starting point for the policy?

Which elements should at least be part of policy?

LEGISLATION

INITIATIVES

Are you familiar with legislation in Suriname? If so, which?

Is the legislation sufficient to protect the Marine environment?

What are the strengths and the weaknesses?

Mention improvement points

Which relevant conventions are there and what is the status with regard to implementation?

What are priority areas for protection / conservation?

Are you familiar with projects concerning the protection of the environment? (coastal waters)

Available relevant reports on the protection of marine environment?

Status as regards Aichi Targets

Aichi Target 4:

By 2020, at the latest, Governments, businesses and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of the use of natural resources well within safe ecological limits This target should be seen as the commitment of governments, the business community and stakeholders at all levels to take steps to bring

resource use to a sustainable level.

Relevant legislation	Gaps in legislation	Obstacles	for	Recommendations for	Possible	implications	of	the
		implementation		approach	recommendations			

Aichi Target 6:

By 2020 all stocks of fish and invertebrate animals and aquatic plants are managed and harvested sustainably and legally by applying an ecosystem-based approach, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of the fisheries sector on stocks, species and ecosystems are within safe ecological limits.

Relevant legislation	Gaps in legislation	Obstacles	for	Recommendations for	Possible	implications	of	the
		implementation		approach	recommendations			

Aichi Target 10:

By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Relevant legislation	Gaps in legislation	Obstacles	for	Recommendations for	Possible	implications	of	the
		implementation		approach	recomment	dations		

Aichi Target 11:

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Relevant legislation	Gaps in legislation	Obstacles	for	Recommendations for	Possible	implications	of	the
		implementation		approach	recommend	dations		

Aichi Target 14:

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Ministry	Responsibilities	Activities with regard to the protection of the
		marine environment
Agriculture, Animal	1. The policy with regard to agriculture, animal husbandry, fisheries	- Establishing the no-fishing zone at Galibi
Husbandry and Fisheries	and beekeeping	during the laying season of the sea turtles.
Department: Fisheries	2. Monitoring the correct use of the land and waters issued for the	- Introducing TED (Turtle Excluder Devices) and
	agricultural sector	BRDs (Bycatch Reduction Devices) for trawling
	3. Research and information in the sectors mentioned	on seabob and large sea shrimp.
	4. Monitoring compliance with the legislation concerning the sectors	- Vessel Monitoring System (VMS) obligation.
	mentioned, where necessary at interdepartmental level	This is a satellite system that collects data
	5. An efficient management of the national fishing properties and	about the activities of fishing boats operating
	the rational exploitation of fish resources, as well as monitoring	at sea.
	the compliance with statutory regulations on the protection of	- The following can be done by means of the
	the fish resources.	VMS:
		• Monitoring and compliance;
		\circ Combating illegal fishing (breeding
		grounds)
		 Guaranteeing safety at sea
		- Drafting the Fishery Management Plan 2014-

Appendix 4 Overview Institutional framework

		marine environment
		2018. The VMP includes the establishment of
		fishing zones for different types of fishing.
		Trawling is not permitted in the waters near
		the coast.
Spatial Planning, Land and	1. The identification, exploration, optimal exploitation and the	- Nature reserves and management areas have
Forest Management	management of the resources, the flora and fauna.	been established under the management of
Department: Nature	2. A responsible nature management and nature conservation.	the Ministry.
Management	3. Monitoring the compliance with rules and regulations with regard	
	the production of timber and timber products, the flora and	
	fauna.	
Natural Resources	1. Identification, exploration, optimal exploitation and the	The Ministry of Natural Resources is charged with
	management of minerals, the natural resource water, the natural	the monitoring of exploitation activities. The
	resources required for energy.	operating unit / strategic partner of the ministry of
	2. Water management, where necessary at interdepartmental level.	NH is the Staatsolie Maatschappij Suriname N.V.
	3. Monitoring rules and regulations concerning water management,	Staatsolie is committed to mitigating the adverse
	the minerals, the generation, transport and distribution of energy.	impact on the environment due to the adoption of
		internationally recognized standards.
		Consequently, it is important to implement the

Ministry	Responsibilities	Activities with regard to the protection of the
		marine environment
		ESIA (Environmental and Social Impact
		Assessment), as well as the regular monitoring to
		identify early warnings.
Office of the President	1. Coordination of the preparation of the environmental policy and	- An environmental policy plan 2018 is being
Environment Coordination	monitoring its implementation, in collaboration with the relevant	prepared, which will include the marine
Unit	ministries and relevant organizations and institutes within the	environment.
	private sector.	- There is an NBAP and an NBSAP. The NBSAP
	2. Promoting the establishment of national environmental	runs from 2016-2020. The NBAP runs from
	legislation.	2012-2016. At the time of formulating the
	3. The development of cooperation mechanisms and networks in	NBAP, the Aichi targets had not been
	order to be able to carry out national and international	identified yet, as a result of which they have
	environmental tasks efficiently and effectively.	not been formally integrated into the policy.
	4. Promoting the implementation of conventions on the	
	environment signed and ratified by the Surinamese Government.	
	5. In collaboration with other ministries, organizations and institutes	
	monitoring companies and other entrepreneurs with regard to	- The 5 th National Report (CBD) gives an
	the use of environmentally unfriendly materials and technologies	indication of the status regarding the Aichi
	and compliance with the statutory environmental regulations.	targets.
	6. Appropriately involving the total community in order to	

Ministry	Responsibilities	Activities with regard to the protection of the
		marine environment
	effectively and purposefully tackle environmental pollution.	
	7. Adequately involving the total community to effectively and	
	efficiently combat environmental pollution.	
Coast Guard	1. Supervisory tasks:	The responsibilities may be subdivided into two
	i. Compliance with the shipping offences and	tasks: the service tasks (monitoring environment)
	shipping violations made punishable in the	and the law enforcement tasks (illegal activities at
	Criminal Code and compliance with	sea, monitoring fisheries). The Coast Guard must
	ii. the Sea Fisheries Act 1980;	ensure that the laws are observed and enforced.
	iii. the Fish Stock Protection Act 1961	
	iv. the Economic Offences Act	
	v. the Shipping Act	
	2. Services-related tasks:	
	a. handling emergency, rush and safety traffic;	
	b. assistance and emergency response, and	
	c. other forms of service.	
	3. Supervisory, investigative and service tasks:	
	a. Monitoring compliance with: the Maritime Zones Act; the	
	Sea Fisheries Act; the Fish Protection Act; the Economic	

Ministry		Responsibilities	Activities with regard to the protection of the
			marine environment
		Offences Act and the Shipping Act.	
Maritime Authori	ty of	1. Ensuring a safe and efficient passage of seagoing vessels to and	- Ensuring that calamities such as ship collisions,
Suriname		from Suriname on the basis of internationally accepted standards	oil spills or the discharge of ballast water do
		and rules and in accordance with the conventions ratified by	not occur / are handled properly.
		Suriname,	
		2. Monitoring the compliance with legal regulations regarding	
		shipping and shipping traffic.	
		3. The <mark>company</mark> is in charge of:	
		 a. carrying out the work in the field of maritime services on a commercial and efficient basis in order to secure the delivery and transport of the import and the export; b. carrying out tasks assigned to the company under or pursuant to statutory regulations; c. being in charge of those transactions that may be deemed to belong to its field of activity by virtue of their connection with the tasks mentioned under a and b; d. the provision of services for third parties in the field of 	
		shipping and furthermore all other acts that are conducive to this purpose.	
National Institute	e for	1. Coordinating the preparation of the Environmental Policy and	- Conducting EISA studies that include aspects
Environment	and	monitoring its implementation, in collaboration with the	of the marine environment.
Development		appropriate Ministries and relevant organizations and institutes	
		within the private sector;	

Ministry	Responsibilities	Activities with regard to the protection of the			
		marine environment			
	2. Promoting the establishment of national environmenta				
	legislation; and all in collaboration with the other Ministries				
	organizations and institutes eligible to that effect;				
	3. Adequately involving the total community in order to effectively	,			
	and efficiently tackle environmental pollution;				
	4. Causing national environmental legislation to be established in				
	the broadest sense of the word;				
	5. Preparing and enforcing the regulations on environmenta				
	protection;				
	6. Coordinating and monitoring its compliance.				
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