REPUBLIC OF SURINAME

National Biodiversity Action Plan (NBAP) 2012-2016

February 2013

Ministry of Labour, Technological Development and Environment

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The National Biodiversity Action Plan (NBAP) 2012-2016

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Preface

The Ministry of Labour, Technological Development and Environment as the responsible authority for the national environmental policy and is in charge of the coordination of activities that must be implemented under the Convention on Biological Diversity.

The formulation of the National Biodiversity Action Plan is one of these activities and is intended as an elaboration of the National Biodiversity Strategy. The National Biodiversity Strategy, which was formulated in 2006, contains the vision statement that expresses that Suriname values and protects its biological diversity.

The National Biodiversity Action Plan identifies activities for eight objectives which are in line with the implementation of the Convention on Biological Diversity. With this action plan, Suriname indicates in which manner it will continue to protect its biodiversity.

The Ministry of Labour, Technological Development and Environment wishes to express its gratitude to the persons who in any manner whatsoever contributed to the preparation of this action plan.

In particular mention should be made of the Global Environmental Facility (GEF), the United Nations Development Programme (UNDP), the Government of Suriname, the management and executive staff of the Directorate Environment, the members of the National Biodiversity Steering Committee (NBSC) and the consultants of Environmental Service & Support N.V. (ESS N.V.).

The Minister of Labour,

Technological Development and Environment

18/02/13

Michael Miskin

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Acronyms and abbreviations

ABS	Access and Benefit Sharing – access to genetic resources and the fair and equitable sharing of benefits arising from their utilization
ACTO	Amazon Cooperation Treaty Organization
AdeKUS	Anton de Kom University of Suriname
ASFA	Association of Suriname Manufacturers
ATM	Ministry of Labour, Technological Development and Environment
BBS	National Herbarium of Suriname (institute within AdeKUS (see above))
BIS	Bauxite Institute Suriname
CARICOM	Caribbean Community and Common Market
CBD	United Nations Convention on Biological Diversity
CBN	Capacity Fund Forest and Environment
CBO	Community-Based Organization – (local) community organization
CELOS	Centre for Agricultural Research in Suriname
CI / CIS	Conservation International / Conservation International Suriname
CIFOR	Centre for International Forestry Research
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EIA / ESIA	Environmental (& Social) Impact Assessment
EU	European Union
FAO	Food and Agriculture Organization
Fin	Ministry of Finance (with division Development Financing)
GEF	Global Environment Facility
GMO	Genetically Modified Organism
IDB / IADB	Inter-American Development Bank
IUCN	International Union for the Conservation of Nature
JP	Ministry of Justice and Police
KKF	Chamber of Commerce and Industry
LBB	Suriname Forest Service, division of ROGB (see below)
MDS	Meteorological Service Suriname
MoU	Memorandum of Understanding
MUMA	Multiple Use Management Area
NB	Nature Conservation Division – division of LBB (see above) in charge of nature and wildlife management
NBAP	National Biodiversity Action Plan
NBS	National Biodiversity Strategy

NBSC	National Biodiversity Steering Committee – committee that guides the work of ATM (see above) in relation to the CBD (see above)
NCCR	National Coordination Centre for Disastermanagement
NCSA	National Capacity Self-Assessment
NGO	Non-Governmental Organization
NIMOS	National Institute for Environment and Development in Suriname
NTFP	Non-Timber Forest Product – plant and animal products from the forest, with the exception of wood
NZSC	National Zoological Collection of Suriname (institute within AdeKUS (see above))
OvNL	Government of the Netherlands
OvS	Government of Suriname
OvVS	Government of the United States of America
OW	Ministry of Public Works
RAP	Rapid Assessment Program - CI's programme for biodiversity studies
ROGB	Ministry of Physical Planning, Land and Forest Management
RO	Ministry of Regional Development
RvM	Council of Ministers
SBB	Foundation for Forest Management and Production Control
SBF	Suriname Business Forum
SBS	Suriname Bureau of Standards
SCF	Suriname Conservation Foundation
SEA	Strategic Environmental Assessment
STS	Foundation for Tourism in Suriname
TBI	Tropenbos International
TCT	Ministry of Transport, Communication and Tourism
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations International Childrens Fund
VIDS	Association of Indigenous Village Chiefs in Suriname
VSB	Suriname Trade and Business Association
WWF Guianas	World Wildlife Fund Guianas (regional office)

1 Introduction

In the beginning of 2007, Suriname presented its National Biodiversity Strategy (NBS), thus implementing article 6a of the Convention on Biological Diversity (CBD[1]) of the United Nations. With the signing of this convention in Rio de Janeiro in 1992, and the ratification thereof by the Suriname Parliament (the National Assembly – *DNA*), the Republic of Suriname committed itself to the formulation of such a strategy. In doing so, Suriname shows that it takes the protection and the sustainable management and use of its biological diversity seriously. The next step was the formulation of the National Biodiversity Action Plan (NBAP), in accordance with article 6a of the CBD. In 2007, a 'Draft NBAP, phase I' was developed, with the focus on the Coastal Zone of Suriname and on the so-called primary objectives of the NBAP (first three NBAP objectives; reference to section 1.2, below). In 2010, phase II of the development of the NBAP was started, with the focus on complementing the NBAP with actions that pertain to the Interior. The present document resulted from this, and is the final version of the NBAP for the whole of Suriname.

1.1 The objectives of the strategy

Seven objectives are distinguished in the National Biodiversity Strategy (NBS), which are described as follows:

[quote]

1. *"Biodiversity will be conserved in Suriname through protection and enhancement of habitats and species at local, regional and national scales;*
2. *The sustainable uses for biological resources will be enacted in local and national economies;*
3. *Research and education will be applied to create access to environmentally sound and safe development, transfer, handling and use of biotechnology and modified organisms, and increased benefit sharing among all citizens for these resources;*
4. *Access to genetic resources and the associated traditional knowledge and fair and equitable benefit sharing;*
5. *Institutional capacity will be enhanced to sustainably manage and monitor biodiversity;*
6. *Education and communication opportunities will be strengthened to improve the awareness of biodiversity conservation planning, management and monitoring at local and national levels; and*
7. *Local participation by communities, scientific community and business in biodiversity planning, management and monitoring will be enhanced as well as the participation with other countries, by strategic alliance with*

[1] The United Nations Convention on Biological Diversity (UNCBD of CBD), one of the three Multilateral Environmental Conventions (MEAs), or multilateral environmental conventions that were effectuated in Rio de Janeiro in 1992.

members of, among others - the Amazon Cooperation Treaty, SIDS and CARICOM."

[unquote]

In the NBS, after a brief explanation of these objectives and their aims, the links are indicated with specific articles of the CBD. Then, for each objective, the strategy provides guidance as to the 'directions' along which these objectives may be realized. These directions somewhat anticipate the NBAP, the action plan.

1.2 The objectives of the action plan

The National Biodiversity Action Plan (NBAP) that has been elaborated in the present document maintains the substance of the NBS objectives, using the NBS 'directions' as the starting point for the formulation of actions which were assessed and if necessary adjusted, jointly with the stakeholders (including actors and rightholders; see section 2.4). The structuring and formulation of the objectives is somewhat modified in present document vis-à-vis that in the NBS, to improve comprehensiveness. Like in the NBS, the choice was made in the action plan to further arrange the actions per objective under headings, which will be referred to as sub-objectives. A sub-objective always comprises actions that are logically related to each other because they e.g. pertain to a specific sub-aspect of biodiversity, a specific social or economic sector, or a special group of stakeholders. In addition, the choice was made to include in the action plan an eighth objective, namely a financial objective (see below). As a result of all this, part of the 'directions' as set out in the NBS were rearranged or even subdivided (i.e. entirely or partly shifted from the one to the other objective).

The eight objectives of the present action plan are further explained in chapter 3, and may be summarized as follows:

1. **Conservation of biodiversity;**
2. **Sustainable use of biodiversity;**
3. **Regulated access to genetic material and associated knowledge, with fair and equitable sharing of benefits;**
4. Knowledge acquisition through research and monitoring;
5. Capacity building;
6. Raising awareness and empowerment through education and communication;
7. Cooperation at local and international level; and
8. Sustainable financing.

The eighth objective of the NBAP concerns the financing of the various actions as these have been proposed in this action plan. The suggestions regarding financing within various objectives from the NBS have been combined under the umbrella of this eighth objective.

The rearrangement of objectives and directions of the NBS as described above, serves to stress the distinction that is made between the so-called primary objectives (1-3: bold in the list above) and supporting objectives (4-8). The

primary objectives are in line with the principal objectives of the CBD (reference to section 2.3). The other, supporting objectives are facilitating in nature, and enable the realisation of the three primary objectives.

1.3 NBAP actions for the period 2012-2016

Objectives can only be realized if we are willing to actually take actions within a specific period of time. In formulating the NBAP actions, two simple guiding principles were followed in order to support the implementation of the NBAP, or to put it more concretely, to ensure that it is clear when an action needs to be implemented and by whom.

The first principle is that a distinction must be made between actions in the short term (start within 1 to 2 years), in the mid term (start within 3 to 5 years), and in the long term (start after 5 years). Actions that would or could only start after 5 years basically are not a part of the present action plan. Actions scheduled to be initiated in the period 2012-2016 may however continue after 2016.

The second principle is that the action plan must specifically mention important stakeholders. The conservation of biodiversity concerns all of us, but the responsibility to take action or at least to kick-start it, often lies more within the competencies and possibilities of the one than the other.

Based on the above, it may be understood that this action plan has a limited lifespan, and that at a given moment (in principle prior to the end of 2016), a new action plan is to be prepared. It will therefore be useful to monitor and assess the NBAP 2012-2016 (see chapter 4).

1.4 The phased development of the action plan

Due to budgetary restrictions, the formulation of the NBAP was implemented on a phased basis. In doing so, a geographic phasing was chosen, distinguishing between the Coastal Zone – including the urbanized areas – and the Interior. During the first phase (I; in 2007) proposed activities regarding the Coastal Zone were described, and actions that serve to achieve the primary objectives were worked out in detail. During the second phase of this project (II; 2010-2012) the activities were aimed at the elaboration and inclusion of actions in relation to the Interior, and with that aimed at completing the NBAP. This also included the detailed elaboration of actions that relate to the supporting objectives.

During phase II, a lot of the actions and sub-objectives that had been formulated in phase I were updated, particularly the actions related to primary objective 3. After all, following the publication of the NBS and the elaboration of a provisional NBAP (2007) there have been developments that have led to somewhat changed circumstances and insights; developments such as:

- increase in planning and execution of infrastructure works, oil and mining activities, and an increasing energy consumption in Suriname. This entailed an increase of impact assessments (EIA's / ESIA's), which in principle must result in measures to avoid the potential negative impact of these developments on the environment and human communities or at least to mitigate such negative impact;

- shift in the policy of the government, away from the establishment of 'independent' management authorities, towards forms of shared responsibility for the management, such as co-management of protected areas by the national or the local government and local stakeholders (which must still be specified in detail and effectuated);
- formulation of a Development Plan for the period 2012-2016;
- shift of the international agenda towards climate change and the UNFCCC, and more focus on the commonalities or overlap of objectives and actions that are related to the three big MEAs (the multilateral environmental agreements UNCBD, UNCCD and UNFCCC);
- international recognition of the fundamental rights of Indigenous and Tribal Peoples, and at a national level, the initiation of a course of action to arrive at the recognition of the rights of tribal communities (Indigenous and Maroons), this in order to solve the so-called land rights issue; and
- the reaching of an international agreement at Nagoya (Japan) in 2010, within the framework of the CBD, specifically in relation to Access and Benefit Sharing (ABS), which among other things implies that countries that ratify the Nagoya protocol should follow the principles of Free Prior & Informed Consent (FPIC).

Additional actions were included in the NBAP that amount to broad, comprehensive consultations with stakeholders; the issue of the rights of communities and FPIC is also discussed (reference to section 2.5). The impact of recent international and national developments on the NBAP of Suriname is accordingly evident.

Returning to the matter of the phased implementation of the development of the NBAP, which resulted in matters pertaining to the Indigenous and Maroons being discussed in the second phase in 2010 and 2011 only, the following: the present final NBAP 2012-2016 document integrates the results of both phases and is therefore a national document that pertains to all NBAP objectives in relation to both the Coastal Zone and the Interior of Suriname.

1.5 Applied methodology

The Ministry of ATM aims at a broad political and civil society support for this action plan. Regularly consulting the stakeholders as well as the experts, is the appropriate way to accomplish this. During the formulation of the various activities several experts in the different sectors were consulted. The main purpose was to get an expert opinion on the relevance and especially the feasibility of the actions as proposed. After all, the action plan must first and foremost be feasible. Accordingly, meetings with stakeholders were the basis for a broadly supported plan in the course of which the basis for both the political and the civil society will for implementation of the action plan was laid. The following consultations were held:

1. launch of the project, in the NIMOS building in Paramaribo on 29 October 2007, during which the various components and phased approach to develop the NBAP were explained;

2. individual consultations with stakeholders and experts (per e-mail, telephone or during a meeting), in the period November - December 2007, to get input in relation to specific actions, mainly in relation to the Coastal Zone of Suriname;
3. workshop for stakeholders in the AdeKUS Guesthouse in Paramaribo on 5 December 2007, at which the various objectives and actions were presented, mainly in relation to the Coastal Zone; the participants were familiarized with the first NBAP draft, and given the opportunity to provide feedback;
4. focal meetings[2] at the ESS office on 12 and 13 July 2010 to arrive at priority actions with regard to the objectives 4, 5, 6, 7 and 8;
5. focal meetings with representatives / representative organizations of the Indigenous people and Maroons established in the capital, held at the ESS office on 20 July 2010 to get an insight into the focal and priority actions from the Indigenous people and Maroons perspective, mainly related to the Interior;
6. informing inhabitants from the Interior, particularly the Indigenous people and Maroons, (end of March – early April 2011) via their representatives during a workshop in the NAKS building at Lelydorp on 6 April 2011, in order to know their points of view as to the problems and actions in relation to biodiversity, particularly in relation to the Interior and the Indigenous people and Maroons; and
7. NBAP validation workshop in the University Guesthouse in Paramaribo on 14 April 2011, at which representatives of stakeholders and experts had been invited and were given the opportunity to respond to adjustments made to the NBAP since 2007.

Activities to arrive at an integral NBAP were combined in 2010-2011 with those to arrive at an integral National Climate Action Plan (NKAP), for which the actions with respect to the Interior remained to be formulated as well. That is why during the last two aforementioned consultations also issues were discussed pertaining to climate change. The climate-related actions proposed as a result thereof were not incorporated in the NBAP, but in the NKAP.

1.6 New actions, current activities and dilemmas

This National Biodiversity Action Plan (NBAP) describes and proposes a large number of new activities. As a result one might get the impression that up to this date hardly anything has been done in Suriname with respect to biodiversity and the CBD or that actions taken earlier were not successful. Such a black and white picture of the situation is not correct and the reality is complicated, and deserves a nuanced analysis. For decades Suriname has done structured efforts for the conservation and management of its national biodiversity. Accordingly, for quite some time Suriname was considered an example and forerunner in the area of nature management and conservation in the Tropics. The 'traditional' efforts that

[2] This means a meeting with a select group of representatives of stakeholders and rightholders and experts, around a specific NBAP subject.

are still being made, must be continued, while additional 'innovative' actions are required around themes elaborated in the CBD and the NBS. Two dilemmas manifest themselves for which special attention is asked here.

The NBAP is in essence based on the 'directions' formulated earlier in the NBS. These 'directions' were often intended to change to the status quo at the time, the period immediately preceding 2007. The focus of the NBAP is therefore on actions that supplement activities that were already taking place prior to 2007. By laying emphasis in the NBAP on such actions, there is a risk that funds and other sources that are currently available for the implementation of ongoing activities, are radically reallocated. By doing this, the ongoing activities (which substantially contribute to the conservation and sustainable use of biodiversity) might stagnate or even completely stop. It is very doubtful whether this is a good plan. The solution to this dilemma is that the NBAP, which is based on the NBS, must be considered emphatically as supplementary or complementary. This said, it must be noted that some actions, as proposed under the 'directions' in the NBS, are meanwhile being implemented (although none of them seem to have been completed). Other actions have become less relevant, due to changed circumstances and points of view (reference to section 1.4).

The second dilemma is related to the previous one and is that there is no clear and updated overview of who is meanwhile already implementing what and which expenses are currently made by the government and others in relation to biodiversity. Therefore it was often not clear within the NBAP context what should either be continued or adjusted, and which additional resources would be necessary for these purposes. This shortcoming originated in the NBS in which the exact motives for the various directions have not been clearly stated, nor substantiated with baseline information or an analysis of the strengths, weaknesses, opportunities, threats relating to expenses and achievements. The dilemma of the absence of a baseline and analysis was addressed during the process of developing the NBAP by discussing the actions proposed in the NBS with both experts and stakeholders who were aware of the developments within the government of Suriname and civil society in general.

1.7 The structure of this document

In preparing this NBAP document, the choice was made for an enumeration of actions in the form of annotated tables, with short explanatory descriptions. This constitutes the core of this NBAP and is presented in chapter 3.

Before doing so, chapter 2 deals with some backgrounds of this action plan, in the course of which various concepts regarding biodiversity and the international and national framework in relation to biodiversity, are discussed.

To conclude, chapter 4 deals with the next steps that must be taken to arrive at a concrete implementation of the actions worked out in this plan.

2 Background

2.1 What is biodiversity?

The concept of biodiversity is used to denote the huge variety of living beings, of communities in which these live together and of genetic material. Most biologists consider people as an integral part of biodiversity, but the general public considers biodiversity rather as the living nature exclusive of people. Biodiversity can be seen as the variety of living, biological resources, at three levels:

1. The diversity of **ecosystems**, such as the sea, the rivers and creeks and the forests and savannas.

   Community essentially means an association of living beings. The technical terms ecosystem and habitat are used more often and pertain to the communities inclusive of the non-living environment, e.g. a forest inclusive of the soil.

2. The diversity of living beings or **biological species**, particularly plant and animal species, but also mushrooms and micro-organisms that are part of communities.

   Living beings belong to different biological species. Different species look differently, behave differently and hardly ever crossbreed in nature. A group of individuals of the same species that can freely propagate amongst themselves is called a population.

3. The diversity of genetic material or **genes**, the information building-blocks of the biological species.

   Each individual living being contains genetic material, hereditary material consisting of so-called genes; the genes are transferred from parents to descendents. The body of an individual develops on the basis of the basic information that is stored in its genes. The genetic information specifically serves to produce the complex chemical substances that in turn serve to build up the body and make it function.

2.2 The importance of, threat to, and conservation of biodiversity

The importance of biodiversity for people may be summarized as follows:

- **supplies biological products** that in principle are inexhaustible if harvested in a responsible manner, such as: fruits, ornamental plants, domestic animals, meat, fish, wood for construction and as fuel and medicinal plants;
- **provides ecological services** that are 'free of charge', as long as ecosystems remain intact, such as: production of potable water, clean air and fertile soil, balancing of the climate and hydrology, protection against erosion, degradation of waste material, pollination of crops and the spread of seeds;

- **results in social advantages** such as: offering subjects for study, serving as a source of inspiration and innovation, and giving the opportunity for recreation and spiritual 'charging'.

In general people are seen as the most important current threat to biodiversity. As a result of globalization, industrialization and human population increase, enormous pressure is exerted on natural ecosystems and species. In Suriname, the human population pressure remains low and relatively few industries have been developed. As a result, biodiversity still experiences little pressure in Suriname. Yet, it is clear that the colonization by Europeans ever since the 17th century, the recent growth of the human population and the expansion of infrastructure, agriculture and mining, has led to a push-back of the natural forest and to the disappearance of wildlife, especially in the parts of the Coastal Zone, which are intensively used. Also in the Interior, at least in those areas where the human population pressure is high and which are easily accessible to hunters and fishermen from urbanized areas, populations of bigger fish and wildlife species have deteriorated. In Suriname, we also see a decline in the use of indigenous languages, knowledge and skills, which seems to be connected to the deterioration of biodiversity.

Representatives of the Indigenous people and the Maroon communities present at the workshop held at NAKS on April 6 stated that they are in a disadvantaged position compared to the population in the Coastal Zone of Suriname and see that as an important threat to biodiversity. They further stated that the lack of local employment forces them to engage in non-sustainable activities in their territories, such as commercial hunting and excessive clearing of forest for shifting cultivation. Due to the lack of electricity, people cannot preserve their food (e.g. meat) for a long time and that is why they are forced to hunt and fish more than strictly necessary. But the Indigenous people and the Maroons also stated that the introduction of the cash economy in the Interior has led to the deterioration of biodiversity. In addition, respect for the traditional authorities of the villages is decreasing and traditional, sustainable use of the land and biodiversity is also decreasing. This is furthermore seen as a threat to traditional knowledge that might get lost or can be traded without involving the traditional collective owners.

Ecosystems are preserved in-situ, i.e. by leaving representative areas in their natural state. Threatened plants and animal species are also kept in-situ by protecting their natural habitat against further damage by people and by prohibiting the killing or removal of individuals of those species. Genetic material is preserved by maintaining several, preferably big populations of species, and by incidental crossbreeding of animals from different populations. Some species have meanwhile been extirpated in the wild and have to be preserved ex-situ, which means that they are bred in zoos or wildlife parks and then later on, if possible, re-introduced in nature. At present, genetic material of species or varieties that are disappearing is being stored.

The basic idea of sustainable use is that biodiversity is a renewable source of products, services and other advantages that are of vital importance to people, and that it should be avoided to erode that source by overconsumption, to avoid that the advantages will be lost on the long term. The question remains to what

extent the term 'sustainable' can be linked to certain forms of use of biological natural resources and related cultural resources. There are several aspects with regard to sustainability, at least:

- ecological sustainability: the resource must continue to exist or regenerate despite exploitation;
- economic sustainability: the products and/or services derived from the resource must yield sufficient economic benefits or revenues; and
- social and cultural sustainability: the consumption activities must fit within the social and cultural framework of the human community.

The question that may be raised, is whether agriculture and tourism can be qualified as sustainable. With agriculture in any case you get a severe disturbance of the natural biodiversity and tourism leads to drastic social and cultural changes. The 'sustainable use' concept is open to all kinds of interpretation; in practice it is defined as different kinds of uses that, to the extent reasonably possible, entail prevention, reduction and/or restoration of possible harm done to biodiversity and the environment in general.

The challenge is to convert the concept of sustainability into practice. For such purposes, rules have to be determined such as e.g. in relation to permissible harvest levels. It is however, not so easy to apply the concept of sustainability. Harvesting a product can easily have a negative impact on another product or service supplied by the ecosystem. Side effects can be expected of any form of consumptive use, in other words, use in the course of which at least a part of biodiversity is killed or removed. Non-consumptive use of biodiversity, such as nature tourism is seen as extremely sustainable from a strictly ecological perspective.

Sustainability has a somewhat different meaning in relation to activities that in most cases cause severe damage to biodiversity, such as mining. In this context, excessive damage should be avoided, and the repair of that which has been damaged, in the sense that the capacity of the ecosystem to supply sustainable products, services and other benefits, is restored. Often a full repair, called restoration, is not possible and one then proceeds to rehabilitation, i.e. a kind of partial repair.

2.3 Framework for conservation and sustainable use of biodiversity

Within the context of this action plan, the most important international convention is of course the UN Convention on Biological Diversity (CBD), as agreed in Rio de Janeiro in 1992. The most important objectives of the CBD are:

- the conservation of biodiversity;
- the sustainable use of biodiversity; and
- the access to and the fair and equitable sharing of the benefits arising from their utilization

The policy of Suriname in relation to biodiversity can be primarily found in the National Biodiversity Strategy (NBS). In Suriname there is no legal framework in relation to biodiversity in particular, but there are specific laws aimed at the

conservation and protection of biodiversity (among other things for the establishment of protected areas, for wildlife management, for the management of fish stocks and for forest management). Suriname is engaged in preparing an environmental framework law, which will also be relevant to the conservation and sustainable use of biodiversity.

The most important ministries in Suriname engaged in biodiversity are the ministries of Labour, Technological Development and Environment (ATM), of Physical Planning, Land and Forest Management (ROGB) and of Agriculture, Animal Husbandry and Fisheries (LVV). ATM is in general responsible for the environmental policy, while ROGB and LVV are responsible for the management of wild and domesticated biodiversity. Other ministries to which also biodiversity-related tasks have been assigned include the ministry of Natural Resources (NH), Public Works (OW) and Transport, Communication and Tourism (TCT), because they substantiate the policy of the government in the area of exploitation of natural resources (e.g. mining, infrastructure and tourism).

As a part of Suriname's civil society, the local communities are of great importance, particularly the Indigenous people and Maroon communities and the NGOs and CBOs associated with them. Umbrella and environment-related organizations that are active in Suriname are also important, as are the private sector (organized in a number of associations), supporting financing mechanisms, multilateral organizations and foreign governments with representation, programmes or projects in Suriname.

2.4 Stakeholders and rightholders

The word stakeholders can be broadly interpreted. It can also comprise actors and rightholders. At the workshop held on April 6 at NAKS, as well as during one of the focal meetings, representatives of organizations which promote the interests of the Indigenous people, stated that the Indigenous people need to be considered rightholders and should also be designated as such; according to them, the term stakeholders is inappropriate. At NBAP level this is relevant, at least within the specific context of access to genetic resources in traditional territories and in relation to traditional knowledge[3]. This may be further examined within the framework of the national approach of the so-called land rights issue (reference to section 2.5).

The choice of words is a sensitive issue because it is related to judicial disputes between the state of Suriname on the one hand and on the other hand the Indigenous people and Maroons (and organizations that promote their interests).

2.5 Land rights and FPIC

Based on the Constitution of the Republic of Suriname (1987) the entire Suriname territory, except for privately owned land, is 'domain' of the state. Neither this decree, nor the Constitution (1987; amended in 1992) provides for

[3] On the basis of the Nagoya ABS protocol, which however has not been ratified yet by Suriname.

collective rights to property, while the Indigenous people and Maroons do claim these rights on the basis of international law.

In 2007, Suriname cast its vote in the UN in favour of the *UN Declaration on the Rights of Indigenous Peoples.* The government of Suriname has committed itself to solve the so-called land rights issue. The core thereof is recognition of collective property rights of Indigenous people and Maroons to among other things the land that they have lived on and cultivated traditionally. Although these rights are formally not yet recognized in the national legislation of Suriname, internationally Suriname has already committed itself to recognize them. A national 'translation' of this concept must still take place in Suriname. The solution of the land rights issue is a precondition to steer access to and the use of traditional knowledge with regard to biodiversity in the right direction which also contributes to the conservation and the sustainable use of biodiversity.

Something that is closely related to this is the involvement of local communities (particularly of Indigenous people and Maroons) in development plans and policy formulation that influences their rights, culture, way of living and/or territory, in accordance with the principle of Free Prior and Informed Consent (FPIC). According to this principle, the local population must get a specific formal role and power of decision in various development processes. Representatives and representing organizations of Indigenous people and Maroons urge to apply the FPIC in the drafting of policy, the development and implemention of projects, as well as with regard to several actions mentioned in the current NBAP.

3 From objectives to actions

The National Biodiversity Strategy (NBS) ends with a paragraph that provides guidance for the formulation of an action plan. In it, it is stated that it is desirable to offer clarity, for each proposed action, with regard to the following:

- The institutes, the persons or organizations responsible for the implementation, and others that should be involved;
- The necessary inputs – people and means (organization, logistics and infrastructure);
- The importance of activities (high, limited, minor) and the priority (short-term, mid-term, and long-term);
- The outputs (= milestones in the NBS) that are measurable within the framework of monitoring and evaluation of the plan at a later stage;
- The estimated **additional** budget necessary for implementation and potential financing sources;
- Risk factors, if any, or in the positive sense: necessary conditions to kick-start actions or to have these succeed.

The proposed actions have been summarized in the form of tables. To improve comprehensiveness, the actions have been classified under headings within each objective, which we denote as sub-objectives. Actions of a general importance have been placed in the tables in yellow highlighted boxes; actions that are exclusively or mainly relevant with regard to the Coastal Zone (and the urbanized areas) have been placed in orange highlighted boxes and actions that are exclusively or mainly relevant with regard to the Interior, in green highlighted boxes. At the top of each table, an overview is provided of important points, including of the total of the estimated costs to implement the actions. We also refer to the schematic overview below.

Desired actions	
Overview	(concise summary of all actions within the sub-objective)
Yellow action	= action of **general** interest
Orange action	= action exclusive of / mainly relevant with regard to the **coastal zone** (inclusive of urbanized areas)
Green action	= action exclusive of / mainly relevant with regard to the **Interior**

Actions that must start in the short term – in principle in the first two years – or in the mid term – in principle within three to five years following publication of the NBAP – have been worked out in full (as far as input, output, relevance, priority, costs etc. are concerned). A summary has been included of actions that should be undertaken thereafter, but these have not been worked out in detail.

3.1 Conservation of biodiversity

The conservation of biodiversity is a main objective of the CBD and of the NBS. A basic concept is that the global biodiversity is preserved by member states taking measures to keep specific areas within their territory – the so-called protected areas – as intact as possible. Currently in Suriname these are the government-designated nature reserves, nature parks and Multiple Use Management Areas (MUMAs). In Suriname, such as within the traditional territories of the Indigenous people, so-called "protected areas" have been designated by these people themselves. These, however, do not have the legal status of protected area in conformity with the national legislation. The on-site preservation of ecosystems, including populations of biological species and their genetic material, is referred to as *in-situ* conservation. So-called *ex-situ* conservation – the maintenance of species in gardens, zoos or parks set up by people – is also an option, but in Suriname this is not focused upon. When protected areas are established, typically the aim is to have a representation of all ecosystems and to protect the habitat of endangered animal species. The protection outside of protected areas is, however, also important, particularly for vulnerable species, as the protected areas comprise only a limited part of the territory of a country (currently in Suriname about 14 %). Important plant and animal populations are present outside the protected areas. In particular animals do not stick to borders of areas (or countries) designated by people, which in many cases have borders on paper only.

It should be clear that there is a link between the conservation of biodiversity and the planning of land use. There is also a connection with the risk and the response to calamities. The choice of the locations of protected areas must be well-considered; on the one hand land use conflicts must be avoided and on the other hand the areas should not be too susceptible to disasters, both natural disasters (such as droughts and floods) and industrial disasters (such as pollution by oil and waste substances and fires). Biodiversity outside the protected areas may to an important extent be protected on the basis of a Strategic Environmental Assessment (SEA) or of project-bound environmental impact studies (Environmental (and Social) Impact Assessment; E(S)IA). The guiding principle of E(S)IA is that environmental damage must be prevented, mitigated or repaired. This principle has been applied in Suriname for some time now, especially in relation to large-scale mining and is also increasingly applied to infrastructure projects and projects for the large-scale use of biological resources, such as ecotourism and plantation establishment. This exemplifies the link between conservation and the use of biodiversity. Special attention is necessary to see to it that foreign and potentially dangerous substances, objects and organisms

(particularly invasive species[4]) do not end up in natural ecosystems. These can spread and may cause grave damage to the local biodiversity. Examples in this respect are plastic bags that end up in water and which could cause sea turtles to suffocate when they swallow these, toxic chemical substances that are used in industry (such as mercury that poisons animals) and exotic herbs that replace indigenous plants, alien diseases that kill indigenous plants and animals and exotic animals, such as *Tilapia* (*Oreochromis mossambicus) t*hat eat many indigenous fish and their food.

Objective 1: Conservation of biodiversity

The conservation of biodiversity is possible by protecting ecosystems in a system of protected areas and additional protection of vulnerable species both inside and outside protected areas. In doing so, biodiversity is preserved in-situ and remains completely available for future use. Within this framework, measures should also be taken to arrive at land-use planning and to prevent, mitigate or repair excessive damage to biodiversity resulting from human activities, but also those that which may result from natural disasters.

Sub-objective 1.1: Adjusted national laws and rules for the conservation of biodiversity inside and outside protected areas

The national laws and regulations in relation to the conservation of biodiversity need to be further adjusted in accordance with international obligations. Adjustment is also necessary to make regulation more effective and better applicable, particularly by delegating tasks. The emphasis in this respect is on laws and rules that pertain to protected areas and vulnerable species that need in-situ protection. In formulating laws and regulations, the land rights issue must be taken into account. It must be examined whether the local communities can manage protected areas themselves in areas that they use for traditional purposes.

[4] *Invasive species* are biological species (plants, animals, and micro-organisms) that mostly do not occur naturally in Suriname, but have been intentionally or accidentally introduced by people, and have consequently dispersed and reproduced in nature, often at the expense of indigenous species, and possibly with adverse consequences for man and environment in Suriname.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	especially judicial / technical expertise; consultants	analytical results, (draft) laws, etc.	high / short to mid term	especially ATM in cooperation with ROGB, LVV, NH	SRD 345,000	OvS, SCF, GEF	commitment by government officials necessary
1. identify obligations on the basis of relevant international treaties	Judicial / technical expertise; consultant	Annotated overview treaties and obligations	high / short term	ATM in cooperation with BUZA, ROGB, LVV, NH	SRD 45,000	OvS	commitment by staff of ministries necessary
2. compare obligations with existing national laws / rules	Judicial / technical expertise; output from 1; consultant	analysis discrepancies laws / regulations and obligations	high / short term	ATM in cooperation with ROGB, LVV, NH	SRD 45,000	OvS, SCF, GEF	commitment by staff ministries necessary
3. evaluate options establishment protected areas by communities	consultant; opinions stakeholders	analysis and concrete recommendations laws / regulations	high / short term	ATM in cooperation with ROGB, RO and stakeholders	SRD 90,000	OvS, SCF, GEF	requires consultation with relevant stakeholders
4. evaluate effectiveness current national laws / rules	consultant; field data; opinions stakeholders	analysis and concrete recommendations for adjustments laws / regulations	high / short to mid term	ATM in cooperation with ROGB, LVV, NH, RO and relevant stakeholders	SRD 90,000	OvS, SCF, GEF	requires consultation with relevant stakeholders and analysis field data
5. Adjust where necessary laws and regulations and also terminology (e.g. in line with IUCN)	Judicial expertise; output from 2, 3 and 4; consultant	Drafts adjusted laws / regulations	high / short to mid term	ATM in cooperation with LVV, NH, RO	SRD 60,000	OvS	commitment staff several ministries necessary, consultant

6. approve adjusted laws / regulations	Political approval; output from 5	Ratified adjusted laws and regulations	high / short to mid term	RvM, Council of State and Parliament in cooperation with ATM, ROGB, LVV, NH, RO	SRD 15,000	OvS	commitment by decision-makers necessary

Sub-objective 1.2: Preserving the biodiversity of Suriname in an adequate and effective national system of protected areas and in areas beyond this system

The national system of legally protected areas needs to be expanded to accomplish 100 % representation of all ecosystems and biological species. Protected areas need to be delimited in such manner that land use conflicts are avoided as much as possible. The system of protected areas needs to be managed in an effective manner in order to be able to guarantee the desired protection, both in the Coastal Plain (where MUMAs have been established) and in the Interior (where nature reserves have been established). Specific vulnerable biological species also need protection outside the protected areas, particularly endangered animal species that are highly mobile and have a large territory, as well as endemic species (i.e. species unique for a specific area) that only occur outside the current protected areas. Upon establishing new protected areas, tribal land rights issues needs to be taken into account.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	# data, consultations, consultants, ...	recommendations, plans, regulations ...	high to limited / short to long term	Esp. ROGB in cooperation with relevant stakeholders	SRD 17,715,000 in the short / mid term[5]	OvS, GEF, SCF, IADB, OvS...	effort by ROGB, local administration and relevant stakeholders necessary

[5] "in short / mid term" refers to funds that are necessary during 2012-2016 for activities that continue after 2016 and then require additional financing.

1. identify species and areas that need effective protection urgently	existing data eco-systems / species (incl. EIA); info about threat; consultant	recommendations about species and areas that need protection urgently	high / short term	ROGB in cooperation with AdeKUS and CIS, WWF Guianas, and IUCN	SRD 300,000	SCF, CIS, WWF Guianas	commitment by AdeKUS and ROGB necessary and data from recent EIA, RAP and other field studies
2. preparing or adjusting management plans nature reserves and vulnerable species	existing management plans; consultations; consultant; output from 1	Plans for management existing nature reserves and vulnerable species	limited / short to long term	ROGB in cooperation with AdeKUS, (inter)national experts and relevant stakeholders	SRD 900,000 in the short / mid term	SCF, WWF Guianas, GEF	commitment by and consensus between local administration, relevant stakeholders and ROGB necessary
3. effective management of existing protected areas	Management agency; output from 2	active management and effective protection biodiversity	high to limited / short to long term	ROGB in cooperation with local authorities, managers and relevant stakeholders	SRD 7.500.000 In the short / mid term	OvS, SCF	outsourcing / delegating tasks necessary and establishing co-management structures
4. implementation Coastal Zone management plan (ICZM plan)	designation / establishment authority coastal management; technical expertise; output from 2	effective measures for management coastal strip	high / short to long term	ATM, LVV, ROGB in cooperation with other ministries and relevant stakeholders	SRD 7.500.000 In the short / mid term	OvS, FAO	Support necessary of local administrations, and RvM
5. EIA for establishment new protected areas	consultations; consultant; output from 1	analysis of anticipated impact of new protected areas	high / short to long term	ATM in cooperation with ROGB and relevant stakeholders	SRD 1.500.000 In the short / mid term	SCF, WWF Guianas, GEF	Effort by and consensus relevant stakeholders and ROGB necessary
6. establishment of new protected areas	judicial / technical expertise; output from 5	Drafts for regulation establishment new areas	high / short to long term	ROGB in cooperation with ATM	SRD 15.000 In the short / mid term	OvS	Involvement staff ROGB necessary (particularly LBB)

Sub-objective 1.3: Rational designation and use of land, taking into account biodiversity conservation and the impact of disasters

Changes in land use may not lead to excessive damage to vulnerable ecosystems and species. Development projects need to be assessed in advance as to their potential environmental damage. The response to disasters (natural and industrial) must be planned to minimize environmental damage. Incompatible land use in or in the surroundings of protected areas should be avoided.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	GIS and EIA data, expertise, consultations, consultants	overview, analyses, recommendations, ...	high / short– long term	Esp. ATM, ROGB, Fin., Planning Office	SRD 4650,000 In the short / mid term	OvS, GEF, IADB and companies	commitment necessary by GLIS, AdeKUS and local administration
1. evaluate current land use in function of environmental impact	GIS and EIA data; technical expertise; consultant	overview of land-use and analysis environmental impact / environmental risk	high / short -mid term	ROGB, ATM, Fin. and Planning Office in cooperation with NH, LVV, OW	SRD 600,000 in the short / mid term	OvS, GEF	elaborating on GLIS, AdeKUS and decentralization projects
2. zoning of land in function of options sustainable use	GIS and EIA data; consultant; output from 1	Annotated maps with indication use options	high / short – long term	ROGB, ATM, Fin. and Planning Office in cooperation with NH, LVV, OW	SRD 300,000 in the short / mid term	OvS, GEF	elaborating on GLIS and decentralization projects

3. conduct SEA for inter-linked development projects and development policies	Development proposals; consultations; consultant	analysis environmental risks and costs/benefits; recommendations to reduce environmental impact	high / short – long term	Fin. in cooperation with ATM and other ministries, companies and relevant stakeholders	SRD 1,500,000 in the short / mid term	OvS, IADB, and companies	commitment necessary by ATM, combined national-international consultancy teams
4. evaluation compulsory EIA of independent development projects	Project proposals; results baseline and impact studies; consultant	review of analysis environmental impact and recommendations to reduce environ-mental impact	high / short – long term	ATM in cooperation with the relevant ministries	SRD 1,500,000 in the short / mid term	OvS and companies	commitment necessary by NIMOS, experienced consultancy teams
5. develop plans to minimize environmental damage in case of disasters	technical expertise; output from 1; consultant	Planning disaster response plans	high / short -mid term	Min. Defence in cooperation with ATM, the relevant ministries, NGOs	SRD 750,000	OvS, IADB	coordination by existing disaster response unit

Sub-objective 1.4: Responsible mining with minimisation of damage to the environment and biodiversity and environmental restoration

Within the mining industry (both large scale and small scale) there is a need for mitigation of the negative impact on the environment, the effective rehabilitation of areas where mining operations have been conducted, and the implementation of closure plans upon the termination of mining operations.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultations, authority, ...	recommendations, laws, directives, ...	high / short – long term	esp. NH and ATM	SRD 1 ,680 ,000 In the short / mid term	OvS, WWF Guianas, companies	demands political and financial support

1. evaluation mining policy and practice in function of sustainability	technical expertise; consultant; consultations	analysis and recommendations for prevention, mitiga-tion and repair of environmental damage	high / short term	ATM in cooperation with NH, mining-companies and relevant stakeholders	SRD 150 ,000	OvS, WWF Guianas and companies	Demands thorough examination of mining policy and mining practice, incl. consultations
2. adjustment mining policy and mining legislation	technical and judicial expertise; political approval; output from 1	directives / laws aimed at responsible mining	high / short term	NH in cooperation with ATM	SRD 15 ,000	OvS	support necessary of the minister of NH, the RvM and the parliament
3. adjustment mining permits with regard to environmental restoration	Output from 1 and 2; consultations	permits with obligation for rehabilitation / restoration mines	high / short term	ATM in cooperation with NH and relevant stakeholders	SRD 15 ,000	OvS	adjustment permits required, particularly existing ones
4. enhancement of practices that limit environmental impact with small-scale mining	authority; field inspection; output from 1 and 2	Penalties in case of environmental damage and reward in case of mitigation of damage	high / short – long term	NH and ATM in cooperation with tax authorities, police and army	SRD 1 ,500 ,000 in the short / mid term	OvS and companies	on the basis of revenues from levies and fines

Sub-objective 1.5: Spread of dangerous objects, substances or organisms in natural ecosystems limited and under control

Uncontrolled introduction and spread of dangerous objects or substances (toxic substances such as mercury, cyanide, biocides) and organisms (so-called invasive species) can cause grave damage to the environment and biodiversity, especially in protected areas where nature conservation is the first priority. The import of dangerous objects, substances and organisms should be carefully regulated and controlled; in case of risks, measures need to be taken to prevent or limit damage.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	esp. technical expertise, consultants	overview, directives, control, ...	high to limited / short - long term	esp. ATM, HI, LVV, ROGB	SRD 2,280,000 in the short / mid term	OvS, FAO, GEF	commitment by staff of the relevant ministries necessary
1. conduct inventory of hazardous objects, substances and organisms	technical expertise; consultant	overview hazardous objects, substances and organisms	high / short term	ATM in cooperation with LVV, NH, HI, AdeKUS, private sector	SRD 750,000	OvS, FAO, GEF	listing and recommendations in the basis of available information
2. develop (new) laws / regulations with respect to *invasive species*	judicial / technical expertise; consultant; output from 1	drafts of laws / regulation	high / short - mid term	ATM, LVV in cooperation with JP, ROGB	SRD 150,000	OvS, FAO	commitment by staff ministries necessary, with assistance by consultant
3. approval laws / regulations with respect to *invasive species*	political approval; output from 2	approved / ratified laws and regulation	high / mid term	RvM, Council of state and Parliament in cooperation with JP, ATM, ROGB, LVV	SRD 15,000	OvS	commitment by decision makers necessary
4. revise list import of hazardous objects, substances and organisms	technical expertise; political approval; output from 1	ministerial directives for regulation	high / short term	HI and LVV in cooperation with ATM, NH	SRD 15,000	OvS	cooperation required of relevant ministers and of customs
5. intensify control of import of substances and organisms	authority; technical expertise; output from 4	effective control at the borders and import facilities	high to limited / short - mid term	HI and LVV in cooperation with Fin.	SRD 300,000 in the short / mid term	OvS	training of customs and other inspection services required

6. establish and use quarantine facilities for suspicious organisms	authority; technical expertise; output from 5	Effective isolation of suspicious organisms	limited / short -long term	LVV in cooperation with AdeKUS-CELOS	SRD 750,000 in the short / mid term	OvS, FAO	inspection necessary by specialists of LVV and AdeKUS
7. inspect hazardous objects, substances and organisms in protected areas	authority; technical expertise; output from 1	Effective prevention of the influx of hazardous objects, substances and organisms	limited / short – long term	ROGB in cooperation with NIMOS, LVV	SRD 150,000 in the short / mid term	OvS, FAO, GEF	control necessary at access routes to protected areas
8. clean up hazardous substances and organisms in protected areas	authority; technical expertise; consultant; output from 1	Elimination of hazardous substances or organisms already present	limited / short - long term	ROGB in cooperation with NCCR, NIMOS and AdeKUS-CELOS	SRD 150,000 in the short / mid term	OvS, FAO, GEF	action necessary in and around protected areas

3.2 Sustainable use of biodiversity

The use of biodiversity, but then the sustainable use thereof, is also a principal objective of both the CBD and the NBS. The use of biodiversity is of vital importance to people since nobody can feed himself on a daily basis without plant or animal products. The relationship with nature and wild plants and animals are particularly tight with people who lead a self-sufficient lifestyle, as e.g. traditionally the Indigenous people and Maroons in Suriname. The local environment does not only provide them food, but also for example construction materials and medicines. The culture and traditions of self-sufficient communities are very important to get an insight in the use of biodiversity and into the further development thereof. The relation between biodiversity and man is also strong in forestry and agriculture, both the traditional and modern agriculture, in which upgraded crop varieties and animal breeds are used, which originate from wild plants and animals. Even the genetic material that is currently used in high-tech bio-industry still originates from living organisms. Biodiversity directly and indirectly supplies a broad range of products that are used by man and which – due to the biological nature of the source – in principle can be produced in a sustainable manner. Biodiversity is also the basis of nature and ecotourism and is thus also essential for some relaxation and reflection. One may even state that ecosystems provide direct services, such as purifying, storing and gradually releasing fresh water, producing oxygen and the sequestration of carbon dioxide. Biodiversity, particularly the biodiversity of forests and oceans, in fact supplies an invaluable service by balancing the climate and keeping our planet liveable. The products mentioned, as well as the services, are increasingly expressed in monetary terms. They represent, at least potentially, an important source of income for Suriname.

Objective 2: Sustainable use of biodiversity

The sustainable use of biodiversity can constitute the basis for sustainable development, on the condition that Suriname's potential with regard to producing goods and rendering services on the basis of biological resources is also recognized, is effectively valued, and is used in a sustainable manner, or at least as responsibly as possible.

Sub-objective 2.1: Sustainable fisheries in the marine, estuary and inland waterways

The catch of among other things shrimp off the coast of Suriname has reached a plateau, which indicates that a transition is urgently necessary to sustain offshore fishing, based on sustainable harvest and a general mitigation of damage to the biodiversity of the sea and of the coastal strip. In the rivers and swamps of parts of the coastal zone and the interior, the commercially interesting and bigger freshwater fish such as *kwikwi* (*Hoplosternum littorale*) and *anjumara* (*Hoplias aimara)* have become scarce, which indicates that also in this respect there is a need to proceed to sustainable fisheries.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultant, consultations, ...	analysis, directives	high - limited / short – long term	LVV, ATM and relevant stakeholders	SRD 2,115,000 in short / mid term	OvS, WWF Guianas, FAO	support of the relevant minister necessary
1. evaluate the fisheries offshore and in the estuary zone in function of sustainability	technical expertise; consultations; consultant	analysis and recommendations for sustainable fisheries	high / short – long term	LVV in cooperation with ATM and relevant stakeholders	SRD 1,500,000 in short / mid term	OvS, WWF Guianas, FAO	Demands screening fisheries practice especially offshore and support coast guard

2. evaluate the fresh water fisheries in function of sustainability	technical expertise; consultations; consultant	analysis and recommendations for sustainable fisheries	limited / short -long term	LVV in cooperation with ATM, RO and relevant stakeholders	SRD 600,000 in short / mid term	OvS, WWF Guianas, FAO	Demands screening fisheries practice also in parts of the interior,
3. adjust the fisheries policy for more sustainability	technical expertise; political approval; output from 1 and 2	directives aimed at promoting sustainability	high / short - long term	LVV in cooperation with relevant stakeholders	SRD 15,000 in short / mid term	OvS	support necessary of the minister of LVV, RvM

Sub-objective 2.2: Sustainable forestry – both logging and harvest of plant non-timber forest products (NTFP) – and forest restoration

The effective application of measures for sustainable timber- and plant NTFP harvest requires some adjustment of the policy and the necessary self-regulation by the sector, particularly by working in the direction of certification of sustainable forestry operations. There is also a need for restoration of forest areas that were damaged by clear cutting or overexploitation.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, authorities, etc.	recommendations, directives, laws, ...	high - limited / short - long term	Esp. ROGB and ATM	SRD 1,965,000 in the short / mid term	OvS, TBI, CIFOR, IADB, WWF Guianas	Mainly in accordance with national forest policy
1. evaluate exploitation of timber and NTFP in function of sustainability and productivity	technical expertise; consultant; consultations	analysis and recommendations for sustainable and productive forestry	high / short term	RBG in cooperation with ATM, forestry companies and relevant stakeholders	SRD 150,000	TBI, CIFOR	demands screening forestry policy and practice and consultations and support AdeKUS

2. consult relevant stakeholders on forestry practice and the adjustment of laws and regulations	technical expertise; consultant; consultations output from 1	recommendations for adjustment laws and regulations	high / short term	ROGB	SRD 150,000	TBI, CIFOR	demands consultations
3. adjust laws and regulations to the sustainable and productive utilization of forests	expertise; political approval; output from 1 and 2	rules and stimulating measures for sustainability and productivity in the forestry	high / short term	ROGB	SRD 15,000	OvS	support necessary of the minister of ROGB, the RvM, Parliament and companies
4. ensure enforcement of laws on forest exploitation and forest conversion	Revenues from forest exploitation; output from 3	More sustainable production in forestry with less environmental damage	high - limited / short - long term	ROGB (SBB)	SRD 1,500,000 in the short / mid term	OvS, IADB	on the basis of the growth of the sector and use of levies on forest exploitation
5.facilitate certification of forestry companies	output from 2, 3 and 4	Stimulating framework for certification of forestry companies	limited / short – mid term	ROGB in cooperation with forestry companies and certifiers	SRD 150,000 in short / mid term	OvS, WWF Guianas	companies need to be stimulated to proceed to certification voluntarily
6. restore damaged forest areas			Currently of minor importance / implement in the long term				

Sub-objective 2.3: Sustainable use of wildlife (terrestrial)

Wildlife are important as food and they are hunted, collected alive and cultivated to be domestic animals. In large parts of the coastal zone, game species have become scarce for long, as well as in the more densely populated areas of the Interior. Globally many animal

species are disappearing as a result of excessive hunting and trade; these are the so-called endangered animal species that are placed on lists of endangered species by organizations such as IUCN and CITES.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultant, consultations, …	recommendations, reduction illegal trade, quota	limited / short - long term	ROGB, ATM, AdeKUS, exporters, stakeholders	SRD 1,980,000 in the short / mid term	esp. OvS	demands continued commitment by of staff LBB (ROGB)
1. evaluate hunting and collecting animals as a form of sustainable use, incl. system of catch / export quota	technical expertise; consultant; consultations	analysis and recommendations for sustainable use wild animals	limited / short term	ATM in cooperation with, ROGB, AdeKUS-CELOS and possibly also ACTO	SRD 300,000	OvS, WWF Guianas, ACTO	demands screening of hunting and trade and consultations
2. revise the outdated game law	judicial / technical expertise; consultant; output from 1	Drafts for laws / rules	high / hort - mid term	ROGB in cooperation with ATM and JP	SRD 150,000	OvS, OvNL	commitment by staff ministries, with assistance by consultant
3. approval amended game law	political approval; output from 2	ratified laws and rules	high / mid term	RvM, Council of State and Parliament in cooperation with JP, ATM, ROGB, LVV	SRD 15,000	OvS	commitment by decision-makers necessary
4. intensify control on commercial catch / export of wild animals	technical expertise	reduction illegal trade in wild animals	limited / short - long term	ROGB, exporters and customs of Suriname and import countries (e.g. US)	SRD 1,500,000 in the short / mid term	OvS, OvVS	demands continuation commitment by staff LBB (ROBG)

5. adjusting catch / and export quota	technical expertise; output from 1	adjusted quota	limited / short - long term	ROGB and relevant stakeholders	SRD 15,000 in the short / mid term	OvS	demands continuation commitment by staff LBB (ROGB)

Sub-objective 2.4: Responsible tourism, particularly nature and ecotourism

Suriname has the potential to develop responsible nature and ecotourism, which contributes substantially to the economy, with limited negative impact on the local environment and culture. This relates to both the accommodation and hosting of foreign guests and to recreation by residents of Suriname. In order to utilize its potential, nature and ecotourism need to be adequately regulated; sustainability principles need to be integrated in the national tourism policy.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultant, consultations, authority, …	analysis, recommendations, directives, ..	high / short –long term	esp. TCT and companies	SRD 615,000 in the short / mid term	OvS, SCF, EU, CIS	part of adjustment tourism policy
1. evaluation nature and ecotourism in function of growth potential, impact, and sustainability in general	reports on tourism development (see EU financed projects); consultant; consultations	summary of growth trend and growth potential of the sector in Suriname, its impacts and desired response to impacts	high / short term	ATM in cooperation with TCT, STS, ROGB, tourism companies and relevant stakeholders and possibly also ACTO	SRD 150,000	SCF, CIS	demands screening existing reports and some consultations
2. development national standards for responsible business practices in tourism sector	technical expertise; consultant	guidelines that may serve as conditions for licenses for tourism companies	high / short - mid term	TCT and SSB in cooperation with ATM, HI, TCT, STS and tourism companies	SRD 150,000 in the short / mid term	OvS, EU	standardization necessary of the operational management and provision of services in the sector

3. adjust tourism policy to enhance responsible tourism	technical and judicial expertise; political approval; output from 1	directives aimed to tourism growth and mitigation of the negative impact of tourism	high / short - long term	TCT in cooperation with STS and tourism companies	SRD 15,000 in the short / mid term	OvS, EU, CIS	support necessary of the minister of TCT, RvM and consensus with companies
4. facilitate certification of ecotourism-companies	authority; output from 2	stimulating framework for certification of ecotourism companies	high / short - long term	TCT in cooperation with companies and international NGO's such as Ecotourism Society, certification agencies	SRD 300,000 in the short / mid term	SCF, EU, CIS	companies need to be stimulated to proceed to certification voluntarily

Sub-objective 2.5: Responsible agriculture, causing less environmental damage

In practice, agriculture will have to take into account biodiversity more, particularly by minimizing the impact on vulnerable ecosystems and species. For these purposes current agricultural practices will have to be evaluated and the agricultural policy will have to be adjusted. There is a need for a decreased use of chemicals to fight fungi, weeds and insects (biocides), and for an increased use of biological methods and agents that are less harmful to the environment. As the frequent use of chemical fertilizer can be harmful to the soil, groundwater and surface water, the application of alternative fertilizing methods (compost, combining / alternating crops) needs to be encouraged in relation to vulnerable soils.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	esp. technical expertise	analysis, overview and directives	high to limited / short - long term	Esp. LVV in cooperation with ATM	SRD 405,000 in the short / mid term	OvS, FAO	demands commitment by LVV staff

1. evaluate agricultural policy / practice in function of mitigation negative impact	policy plans and results and results recent agricultural census; technical expertise; consultations	analysis and recommendations for responsible agriculture	high / short - mid term	ATM in cooperation with LVV and relevant stakeholders	SRD 60,000 in the short / mid term	OvS, FAO	demands screening agricultural sector plan and field data
2. evaluate the use and the advantages of local strains / varieties	technical expertise; existing field data	overview of local strains and varieties and their use	limited / short - mid term	LVV in cooperation with farmers / communities	SRD 30,000 in the short / mid term	OvS	demands commitment by the various departments of LVV
3. adjust agricultural policy to mitigate negative impact	technical expertise; political approval; output from 1 and 2	directives aimed at promoting responsible agriculture	high / short - mid term	LVV in cooperation with ATM	SRD 15,000 in the short / mid term	OvS	support necessary of the minister of LVV and RvM
4. encourage that pesticides are used sparingly and stimulate transition to sustainable agriculture	expertise; information; field workers; output from 1	effective application of responsible agricultural practices	high / short - long term	LVV and associations of relevant stakeholders (particularly farmers)	SRD 300,000 in the short / mid term	OvS, FAO	demands commitment by LVV public relations officers and associations of farmers, support AdeKUS

Sub-objective 2.6: Responsible application of biotechnology

The application of biotechnology is increasing globally, and is among other things known for the use of genetically modified organisms (GMO's). There is concern all over the world about the potential negative impact of GMO's, and in Suriname attention will thus have to be paid to the safe application of GMO's in among others agriculture and industry. In 2004 a framework was developed for the safe trade in and use of GMO's in Suriname (National Biosafety Framework).

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultant, consultations, ...	analyses, drafts, laws & regulations	limited / short - long term	esp. ATM in cooperation with LVV	SRD 195,000 In the short / mid term	OvS, FAO	adjusted legislation necessary
1. evaluate risks of import and use of GMO's	National Biosafety Framework; technical expertise; consultant; consultations	analysis trends GMO use and risk of use GMO's in Suriname	limited / short -mid term	ATM in cooperation with AdeKUS-CELOS, LVV	SRD 150,000	OvS, FAO	need for information about trends as regards the import and use GMO's
2. revise laws and regulations on. GMO's in accordance with international obligations	judicial / technical expertise; output from 2;	drafts for revised laws / regulations	limited / short -mid term	ATM in cooperation with LVV, AdeKUS	SRD 30,000 In the short / mid term	OvS	demands commitment by staff ministries
3. approve revised laws and regulations	political approval; output from 3	ratified revised laws and regulations	limited / short -long term	RvM, Council of State and Parliament in cooperation with ATM, LVV	SRD 15,000 In the short / mid term	OvS	demands commitment by decisions makers

Sub-objective 2.7: Ecosystems valued for the services they supply

Services such as the purification and release of water by forests, and the absorption of carbon dioxide by the vegetation is considered increasingly more important throughout the world, and is increasingly expressed in monetary terms. Mechanisms to actually generate income from these services must be recognized and used for Suriname. For these purposes, first the economic value must be determined of ecosystems that supply specific services (e.g. mangrove forests that protect the coast, savannah ecosystems that purify water used as potable water) and then the value should be accounted in the price the customer pays to make use of the product (e.g. potable water) or the service (e.g. coastal protection).

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultant, consultations	Capitalization of ecosystem services	high / short term-mid term	ROGB, AdeKUS-CELOS, ATM	SRD 1,050,000	GEF	exchange knowledge / experience necessary at international level
1. make an overview of measurable services of Suriname's ecosystems	technical expertise; consultant; consultations	determined value of services supplied by ecosystems	high / short term-mid term	ROGB in cooperation with ATM, NH, AdeKUS-CELOS	SRD 450,000 In the short / mid term	GEF	demands international exchange of experiences and possibilities
2. carry out a pilot project to pass on the ecological value in the price of a product / service	technical expertise; consultant; consultations	capitalization of services supplied by ecosystems	high / short- mid term	ROGB in cooperation with ATM, NH, AdeKUS-CELOS	SRD 600,000 In the short / mid term	GEF	demands international exchange of experiences and methods to be applied

3.3 Access to genetic material and associated traditional knowledge

A particular principal objective of the CBD concerns genetic genetic material and associated traditional knowledge. It is important to realize that the genetic variety between and within species has an important use value for people. That has been clear for quite some time in agriculture, where crops and livestock are bred and improved, which has resulted in a large number of varieties and breeds that are very useful to people. In Suriname e.g. rice strains have been developed that are specifically adjusted to the local circumstances in the Coastal Zone, while the Indigenous people and Maroons use different varieties of cassava that they have developed over time by selection.

Genetic material is not only present in the complete, living organisms, but also in cuttings, seeds and sperm and egg cells. Random cells and extracts from plants and animals even contain genetic material, or at least biochemical substances produced on the basis of genetic information. These biochemical substances or compounds are directly responsible for the characteristics of organisms and for

application by man, e.g. medicinal characteristics and application. By observation and research, these characteristics can be discovered. Within local communities there is often much knowledge about characteristics of plants and animals that occur in their direct environment; so there is knowledge that is related to the local genetic resources. This so-called traditional knowledge (TK) is typically passed on; it is the result of collective, undocumented efforts over the generations. Within local communities, TK is often seen as a collective property; the intellectual domain of their own community, and not of any individual. Within modern, western-oriented societies specific knowledge is often only vested in specific individuals, institutes or companies, and can be traced back to a moment of innovation. This so-called modern knowledge is seen in western society as intellectual property of the person / entity that realized the actual innovation. Both traditional (TK) and modern knowledge are applied and result in advantages, sometimes substantial economic advantages. A lot of modern industries are based on the deployment of genetic resources and on the knowledge about such resources.

Up to the eighties of the previous century, genetic material and information about traditional use of plants and animals was generally seen as shared global heritage, which was freely accessible, exploitable and exchangeable accross borders. During the negotiations about the CBD, developing countries demanded to be full partners in the distribution of the economic benefits derived from the genetic material and the associated traditional knowledge which originates in their countries. Eventually this led to a fundamental change in the manner in which genetic resources are dealt with. There is still international cooperation that leads to the exchange of genetic material and associated traditional knowledge, but only with prior explicit consent of all parties involved; agreements are made about the sharing of benefits with the countries where the biological resources originate. Each country needs to develop adequate laws and regulations, particularly regulations about the transfer of genetic materials and associated traditional knowledge, the rights to intellectual property and traditional knowledge and the transfer of technology to the country or the community of origin of the resource.

As the access to genetic material and associated traditional knowledge and the fair and equitable sharing of benefits in Suriname is still insufficiently regulated, there is great concern that genetic material and/or the knowledge about hereditary characteristics is used improperly and that the owners of such knowledge or the country as a whole can only insufficiently benefit from the advantages this entails for mankind. In Suriname, in the course of the last decades, research on genetic material and associated traditionsl knowledge has occasionally been permitted. Recent developments, such as the international consensus about the Nagoya Protocol on Access and Benefit Sharing, however, suggest that laws and rules must be developed to make such access possible and transparent, and to bring about fair and equitable benefit sharing.

The Nagoya Protocol on Access and Benefit Sharing makes a distinction between non-profit research and commercial research (research & development; R&D), in the course of which specific (hereditary) characteristics are investigated for the development of commercially interesting products (medicines, cosmetics, food, nutritional supplements etc). Non-profit research is usually in the public interest and is mostly conducted by researchers associated with public institutes. Results thereof are in principle published and are in this way

accessible to the public. With non-profit research there is a need for an easy access to various areas in order to sample and analyse biodiversity. This is certainly necessary to get a better understanding of the biodiversity of Suriname. We are often dealing here with traditional biological inventories of particular areas, which nowadays includes the collecting of specimens for studies of genes. Commercial research, on the other hand, is typically done by researchers who are employed by companies. Such research serves a private, commercial interest and the results are generally not publicly accessible; on the contrary, they may lead to patents. The sharing of benefits is an important issue in relation to commercial research, as this research is intended to realize innovations and the development of products that are commercially interesting. Adequate laws and rules should be in place to share commercial benefits in a fair and equitable manner. In practice this would mean that non-profit research may be allowed in a straightforward manner, without elaborate discussions about the sharing of benefits (which in principle are not financial), while for commercial research, access should be limited, and bound to an additional procedure to ensure fair and equitable benefit sharing, especially of benefits of a financial nature.

A distinction should be made in function of the location of the research. The government of Suriname has always made a distinction between research in protected areas and outside such areas. Given the traditions and the position of the Indigenous and Maroons, research in the traditional territories of Indigenous people and Maroons and research in areas outside such territories, should also be considered.

Additionally, a clear distinction must also be made between research into biodiversity in itself and research into traditional knowledge (TK) about biodiversity. In the first case the emphasis is not on acquiring the knowledge present in the area among the local inhabitants and there is consequently less danger that the traditional knowledge about biodiversity is used improperly. With research into the traditional knowledge about biodiversity, the local knowledge present is explicitly asked for. Such knowledge must be protected and the use thereof must be regulated; there is a need to deal with the holders of traditional knowledge.

Objective 3: Regulated access to genetic material and associated traditional knowledge, with fair and equitable sharing of benefits

There is a need for a fair and equitable sharing of the benefits that derive from the use of genetic material and associated knowledge present in Suriname. Such knowledge is often embedded in the culture and traditions of local communities. The access to genetic material must be regulated and the property rights (e.g. IPR) must be recognized and monitored in relation to both (individual) innovation and (collective) traditional knowledge.

Sub-objective 3.1: Regulated access to genetic material in the territories of Indigenous and Maroons, with fair and equitable sharing of derived benefits

There is a need for laws and regulations that may apply to genetic material, and that regulate the access to and the sharing of benefits that derive from direct use and innovation. This must constitute the basis for research (such as bioprospecting) and technological development, linked to the transfer of technology. This sub-objective specifically pertains to the territories of Indigenous people and Maroons; matters related to other territories are dealt with in the next sub-objective.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise and consultants	laws, rules, agreement	mainly high / short - long term	mainly JP in cooperation with ATM, ROGB, LVV, Indigenous people and Maroons, ...	SRD 2,220,000	OvS, GEF	commitment by staff ministries and consultations necessary
1. evaluation existing agreements / laws / rules with regard to access and IPR	judicial / technical expertise; consultant	analysis agreements, laws etc. with recommendations for regulation	high / short term	JP in cooperation with ATM, VIDS, VSG, ROGB, LVV	SRD 75,000	OvS, GEF	commitment by staff ministries and consultant

Access

2. develop participation mechanisms as regards access to territories Maroons and Indigenous people	anthropological and technical expertise;	draft mechanism for participation of local communities	high / short - mid term	JP in cooperation with ATM, ROGB, representatives of Indigenous people and Maroons	SRD 225,000 In the short / mid term	OvS, GEF	joint efforts necessary during a long period; participation Indigenous people and Maroons essential
3. consultation of traditional communities on laws and regulations to be developed	anthropological and technical expertise; consultations, consultant, output from 1 and 2	Opinion of traditional communities on access to and use of genetic material recorded	high / short term	JP in cooperation with ATM, ROGB, LVV, representatives of Indigenous people and Maroons	SRD 300,000	OvS, GEF	long process, much feedback necessary
4. develop (new) laws / regulations with regard to access to and use of genetic material	judicial / technical expertise; consultant; output from 1 and 3	drafts for laws / rules	high / short – mid term	JP in cooperation with ATM, ROGB, LVV	SRD 150,000	OvS, GEF	involvement of staff ministries with assistance of consultant
5. approval laws / regulations with regard to access to and use of genetic material	political approval; output from 4	ratified laws and rules	high / mid term	RvM, Council of State and Parliament in cooperation with JP, ATM, ROGB, LVV	SRD 15,000	OvS	involvement of decisions-makers necessary
6. make a body / institute responsible for the control and enforcement of access to and use of genetic material			high / long term				

7. develop model agreements for research and development			high / long term				

Sharing of benefits							
8. develop procedures with respect to sharing benefits from the use of genetic material	anthropological and technical expertise; consultation with stakeholders; consultant	model agreement(s)	high / short – mid term	JP in cooperation with representatives of Indigenous people and Maroons and other stakeholders	SRD 300,000	OvS, GEF	apply participation mechanisms
9. develop laws and regulations for the sharing of benefits	judicial / technical expertise; consultant; output from 1 and 8	drafts for laws / rules	high / short – mid term	JP in cooperation with ATM, ROGB, LVV	SRD 150,000	OvS, GEF	possibly combined with action 7 next sub-objective
10. approve laws and regulation for sharing of benefits	political approval; output from 9	ratified laws and rules	high / mid term	RvM, Council of State and Parliament in cooperation with JP, ATM, ROGB, LVV	SRD 15,000	OvS	possibly combined with action 8 from next sub-objective
11. make supervisory body responsible for compliance with agreements with regard to sharing benefits			currently limited importance / long term				possibly combined with action 9 from next sub-objective

Sub-objective 3.2: Regulated access to genetic material in other areas, with fair and equitable sharing of derived benefits

This sub-objective is comparable to the previous sub-objective, but specifically relates to the areas not within the territories of Indigenous people and Maroons. This includes uninhabited / unused areas, concessions, protected areas and privately owned land.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise and consultants	laws, rules, institute, agreement	esp. high / short –mid term	esp. JP in cooperation with ATM, ROGB, LVV, ...	SRD 480,000	OvS, GEF	commitment by staff ministries and consultations necessary
1. evaluation existing agreements / laws / rules with regard to access and IPR	(same as action 1 previous sub-objective)						
Access							
2. develop (new) laws / regulations with regard to access to and use of genetic material	judicial / technical expertise; consultations; consultant; output from 1	drafts for laws / regulations	high / short term	JP in cooperation with ATM, ROGB, LVV	SRD 150,000	OvS, GEF	commitment by staff ministries, with assistance of consultant
3. approval laws / regulations with regard to access to and use of genetic material	political approval; output from 2	ratified laws and regulations	high / short – mid term	RvM, Council of State and Parliament in cooperation with JP, ATM, ROGB, LVV	SRD 15,000	OvS	commitment by decision- makers necessary

4. make a body responsible for the control and enforcement of access to genetic material	judicial / technical expertise; consultant output from 2	appointment responsible body	high / mid term	JP in cooperation with ATM	SRD 45,000	OvS	preferentially categorizing under existing institute; advising by consultant
Sharing of benefits							
5. develop model agreements for research and technological development	judicial / technical expertise; consultant	model agreement(s) voor access, IPR and sharing of benefits with research	high / short term	ATM in cooperation with ROGB, LVV and relevant stakeholders	SRD 150,000	OvS, GEF	consultant necessary and consultations with relevant stakeholders
6. develop procedures for the sharing of benefits from use genetic material	technical expertise; consultation with stakeholders; consultant	model agreement(s)	high / short term	JP in cooperation with ATM, ROGB, LVV, stakeholders	SRD 45,000	OvS, GEF	
7. develop laws and regulations for the sharing of benefits	judicial / technical expertise; consultant	draft laws	high / mid term	JP in cooperation with ATM, ROGB, LVV and relevant stakeholders	SRD 60,000	OvS, GEF	possibly combined with action 9 from previous sub-objective
8.approve laws and regulations on sharing of benefits	political approval; output from 9	ratified laws and rules	high / mid term	RvM, Council of State and Parliament in cooperation with JP, ATM, ROGB, LVV	SRD 15,000	OvS	possibly combined with action 10 from previous sub-objective
9. make supervisory body responsible for compliance with agreements on sharing			currently limited importance / long term				possibly combined with action 11 from previous sub-objective

Sub-objective 3.3: Regulated access to traditional knowledge, with fair and equitable sharing of derived benefits

Adequate laws and regulations will have to be developed to protect traditional knowledge, especially in case of transfer of such knowledge to third parties and the further use thereof. The benefits that ensue from use of traditional knowledge by third parties should be shared in a fair and just manner, particularly among the collective owners of such knowledge. Classical IPR legislation offers insufficient protection to collective rights. Traditional knowledge about biodiversity is emphatically present among Indigenous and Maroons, but not solely among them; this knowledge is also present among other local communities in Suriname.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultant, consultations	Participation mechanisms, laws, ...	high tot limited / short - long term	esp. JP in cooperation with local communities	SRD 555,000	OvS, GEF	participation local communities essential
1. develop participation mechanisms for discussion about the use of traditional knowledge	anthropological and technical expertise; consultation with relevant stakeholders and consultant	participation mechanisms for discussion about the use of traditional knowledge	high / short term	JP in cooperation with local communities, RO, ATM, ROGB, LVV	SRD 300,000	OvS, GEF	cooperation local communities is essential to make next actions possible
2. define what traditional knowledge comprises within the context of Suriname	anthropological and technical expertise; consultation with stakeholders; consultant	definition of traditional knowledge	high / short term	JP in cooperation with ATM, RO local communities, RO	SRD 90,000	OvS, GEF	big involvement of local communities is essential
3. develop laws and regulations to protect traditional knowledge	judicial / technical expertise; consultation stakeholders; output from 1 and 2	draft laws and regulations	high / mid term	JP in cooperation with ATM, RO, local communities	SRD 150,000	OvS, GEF	cooperation with local communities and their representatives necessary

4. approval laws and regulations	political approval; output from 3	ratification laws and regulations	high / mid term	RvM, Council of S tate and Parliament in cooperation with JP, ATM, RO	SRD 15,000	OvS	commitment by decisions - makers and traditional authorities necessary
5. make a body responsible for the control and enforcement			currently limited importance / long term				
6. develop strategy to encourage further regulated use of traditional knowledge			currently limited importance / long term				

3.4 Acquisition of knowledge through research and monitoring

An important additional objective to support the principal objectives already discussed, is increasing the knowledge about biodiversity. Many actions for conservation and use are hardly possible without an understanding of the baseline situation in Suriname as regards ecosystems, species and genetic material. Also information about trends, changes in the situation, is important. The actions proposed below serve to expand the knowledge about the Suriname biodiversity and this on the basis of research and monitoring in our country. Research is usually in-depth, is conducted by specialized institutes and is aimed at acquiring an understanding of the baseline situation. Monitoring is most of the time less in-depth, is often conducted by management bodies and aimed at following changes.

Objective 4: Knowledge acquisition through research and monitoring

The conservation and use of biodiversity depend on the available knowledge on biodiversity; in Suriname knowledge is still limited, but can be increased through research and monitoring.

Sub-objective 4.1: Knowledge acquired through biodiversity research (traditional knowledge, and knowledge of basic biology and use)

In Suriname there is still insufficient information about the ecosystems, species and genetically different populations. There is insufficient knowledge about methods for sustainable use of biodiversity and traditional knowledge has not been sufficiently recorded yet.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, databases, new field data, …	reports, methods, harvest levels, overviews, …	high to limited / short-long term	esp. ATM, AdeKUS-CELOS, LVV, ROGB, …	SRD 13,910,000	OvS, GEF, ...	participation stakeholders necessary
1. rapid assessment of threats to biodiversity	technical expertise, consultant	report about threats of biodiversity in Suriname	high / short term	ATM in cooperation with LVV, NH, ROGB, AdeKUS, CI and companies	SRD 35,000	OvS, CI, SCF	some threats are already known, must be further investigated
2. rapid assessment of the marine ecosystems of the EEZ[6] of Suriname	technical expertise (national and inter-national); existing studies and data-bases; consultant	identification of marine ecosystems, species and populations; evaluation important marine areas	high / short term	ATM in cooperation with LVV, AdeKUS	SRD 3,000,000	GEF, big companies	study necessary that comprises the entire marine area and rapidly results in an overview
3. conduct rapid assessment of biodiversity in areas that are under pressure	technical expertise; consultant; existing EIAs and data-bases	identification of local ecosystems, species and populations; evaluation important areas	high / short term	ATM in cooperation with companies, ROGB, NH, AdeKUS	SRD 450,000	OvS, big companies, CI, SCF	studies on the development mining and infrastructure

[6] An exclusive Economic Zone (EEZ) is an area that extends up to 200 nautical miles (370,4 km) beyond the coast of a state. Within this zone the state has a number of rights, such as the right to exploitation of the raw materials present, the right to fisheries and the right to scientific research.

4. conduct assessment to determine terrestrial ecosystems	technical expertise; existing databases; new field data; output from 3	overview / mapping of terrestrial ecosystems	limited / short – mid term	ROGB in cooperation with AdeKUS-CELOS	SRD 3,000,000	FAO, TBI	need for baseline information with regard to terrestrial ecosystems
5. identify species and ecosystems that are very sensitive to change and can be designated as indicator thereof	technical expertise; existing databases; new field data	determining indicator species and ecosystems for monitoring programmes	high / short –mid term	ATM in cooperation with AdeKUS-CELOS, relevant stakeholders (e.g. companies)	SRD 900,000	OvS, GEF	involvement of companies desired
6. full assessment of the ecosystems of the Interior of Suriname			currently limited / long term				
7. identify tree species and NTFP exploited in forestry	technical expertise; existing databases; new data	overview of valuable wood species, NTFP-species and harvest levels	limited to low / mid term	ROGB in cooperation with AdeKUS-CELOS	SRD 225,000	FAO, TBI	need for baseline information harvest of specific forest products
8. determine levels sustainable harvest of flora and fauna with economic, aesthetic and cultural value	technical expertise; data about use and export; field data; consultant;	methods for harvest of game, ornamental plants and domestic animals that are more sustainable and possibly also more productive	high / mid term	AdeKUS-CELOS in cooperation with ROGB, LVV, companies and relevant stakeholders	SRD 900,000	TBI, WWF Guianas, FAO	close commitment by relevant stakeholders essential
9. develop methods for sustainable harvest of wood, NTFPs and marine resources	technical expertise; existing data and experiments; field data from practice - tests	new / adjusted methods for harvest of wood, plant NTFPs and marine resources	limited to low / mid - long term	AdeKUS-CELOS in cooperation with ROGB, LVV, companies and relevant stakeholders	SRD 900,000	TBI, WWF Guianas, FAO	development of systems for sustainable harvest of wildlife and plants is essential

10. valuation of the resource forest	technical expertise; field data; consultations; consultant; output from 4	overview of the current and potential value of biological resources of the forest	high / short term	ROGB in cooperation with AdeKUS-CELOS, ATM	SRD 3,000,000	GEF, TBI, CIS	valuation is important within the framework of international valuation mechanism
11. make an assessment of traditional knowledge on biodiversity	technical expertise; existing databases; new data	overview of traditional use of plants, animals and other organisms	high / short to long term	local communities in cooperation with AdeKUS-CELOS and other research institutes	SRD 1,500,000	FAO, TBI, GEF, ACT, CIS	record traditional knowledge before it gets lost
12. introduce genetic analysis and regis-tration (barcoding) of organisms			limited / mid-long term				

Sub-objective 4.2: Knowledge of trends in biodiversity and of natural processes and human activities that have an impact thereon

The timely detection of trends in biodiversity is important, as well as the monitoring of the processes and activities that impact biodiversity. On the basis thereof effective and timely measures can be taken. It is important to establish protocols; that means determining which scientific methods will be used to observe, measure and assess.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	technical expertise, existing institute, field personnel, …	overviews, protocols, evaluation reports	high to limited / short - mid term	esp. ATM-NIMOS, ROGB, LVV, AdeKUS-CELOS, …	SRD 13,522,500	OvS, GEF, OvNL, UNDP, companies	requires cooperation and good coordination
General / policy							

1. create overview of monitoring activities and institutes that conduct monitoring in the field of environment and biodiversity	technical expertise, consultations, consultant	overview of institutes and activities in the field of monitoring with recommendation of coordination	high / short term	ATM in cooperation with AdeKUS-CELOS, LVV, ROGB, CIS, WWF Guianas	SRD 60,000	OvS, CIS, WWF Guianas	necessary to be able to develop supplementary monitoring activities
2. create protocols for monitoring of activities	representatives of institutes, regional and international protocols	networks and cooperation mechanism for monitoring	high / short term	ATM in cooperation with AdeKUS-CELOS, NH, LVV, HI, ROGB, communities	SRD 15,000	OvS	requires cooperation from several divisions/units within ministries and organizations
3. conduct monitoring protocols (with regard to implementation of international treaties, national laws and policy)	existing institutes	status quo reports, effectiveness of actions and measures	high / short term	ATM, ROGB	SRD 22,500	OvS, GEF	requires cooperation from several divisions/units within ministries and organizations
4. develop monitoring mechanisms to support the economic valuation of biodiversity	technical expertise; baseline studies; consultant	guidelines for monitoring	limited / mid - long term	ROGB in cooperation with AdeKUS-CELOS, LVV, NH, ATM	SRD 225,000	GEF, World Bank, UNFCCC	cooperation from private and public sector required
Natural processes							

5. monitoring of abiotic and biotic factors, in relation to the sea and fresh water	existing institutes; additional expertise and hardware; coordination	evaluation trends in sea and fresh water and their impact on biodiversity	high to limited / mid term	ATM, LVV, ROGB, AdeKUS, special expertise (external marine experts)	SRD 900,000	GEF	requires cooperation of various divisions/units within ministries and organizations
6. monitoring of climate and analysis of climate trends in relation to biodiversity	existing institutes; additional expertise and hardware	evaluation climate trends in Suriname and possible impact on natural systems	high / short - mid term	MDS in cooperation with AdeKUS, ATM	SRD 900,000	UNFCCC, GEF	requires cooperation of various divisions/units within ministries and organizations
7. monitoring of ecosystems and populations of wild animals and plants	technical expertise; game warden and forest rangers; coordination	evaluation trends in the condition of ecosystems and populations of wild plants and animals	limited / mid term	ROGB in cooperation with AdeKUS-CELOS, SBB	SRD 1,500,000	OvS, GEF, CIS	focus on vulnerable ecosystems and endangered species
Human activities							
8. monitoring of vegetation cover, land use and fires	technical expertise; access to recent satellite data; consultant	evaluation trends in vegetation cover, land use and fires	high tot limited / mid term	ROGB in cooperation with ATM, AdeKUS-CELOS, local communities	SRD 1,500,000	OvS, OvNL	demands cooperation and rough, rapid monitoring and reporting
9. monitoring of the effects of economic activities (e.g. mining, agriculture, industry) on environment and biodiversity	technical expertise; consultants; lab facilities	evaluation trends in the condition of the environment, ecosystems and populations of wild species	high / short - mid term	ATM in cooperation with LVV, NH, AdeKUS-CELOS and companies	SRD 3,000,000	OvS, WWF Guianas, CIS and companies	Result from SEA and EIA processes; subject to willingness of companies

10. monitoring of the harvest of wild plants and animals (in function of sustainability)	technical expertise; supervisors and field personnel; coordination; output from 7	evaluation sustainability of harvest wild plants and animals, and if necessary recommendation of restoration measures	limited / mid - long term	ROGB in cooperation with ATM, AdeKUS-CELOS, local companies, administrations and communities	SRD 3,000,000	OvS	on the basis of reporting by field personnel (e.g. of RO and companies) and local inhabitants
11. monitoring of the use of foreign and local strains and varieties in the agriculture and industry	technical expertise; public relations officers and field personnel; coordination	evaluation trends in use of strains and varieties; impact on biodiversity	limited / mid –long term	LVV in cooperation with ATM, AdeKUS-CELOS	SRD 1,500,000	OvS and companies	on the basis of reporting by field personnel (e.g. from LVV)
12. monitoring of invasive species	technical expertise; public relations officers and field personnel; coordination	evaluation trends in use of strains and varieties, and impact on biodiversity	limited / mid - long term	HI in cooperation with LVV, AdeKUS-CELOS,	SRD 900,000	OvS	on the basis of reporting staff from HI (import) and companies

Sub-objective 4.3: Accessible national databases about biodiversity with the results of research and monitoring

The results of research and monitoring can be optimally used by and for the stakeholders when these are accessible in databases.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	existing data, software, coordination, ...	Accessible databases	high tot limited / short - long term	ATM, AdeKUS-CELOS, GLIS	SRD 690,000	OvS, GEF, SCF	entering data and cooperation institutes required

1. identify available data about biodiversity	existing digital and analogue data; consultant; coordination	overview of available data and database systems	high / short term	ATM in cooperation with ROGB, AdeKUS	SRD 45,000	OvS, SCF	cooperation of institutes that have data available/ manage data, required
2. make existing data on flora and fauna accessible	existing digital and analogue data; software expertise; coordination; output from 1	accessible database about Suriname flora and fauna	high / short - mid term	ATM in cooperation with ROGB, AdeKUS	SRD 300,000	GEF, SCF	entering analogous data required and converting digital data in user friendlier format
3. make existing data on ecosystems accessible	existing analogous data (e.g. vegetation and topographic maps); technical expertise; consultant	accessible database about ecosystems in Suriname	currently limited / mid - long term	ATM in cooperation with ROGB, AdeKUS-CELOS and GLIS	SRD 300,000	GEF, SCF	digitizing existing maps required and placing digital data in useful format
4. examine which international organizations / networks Suriname would have to join to exchange data and information	technical expertise; consultant	recommendations regarding organizations and networks Suriname can benefit from by joining them	high / long term	ATM in cooperation with ROGB, AdeKUS and LVV	SRD 30,000	OvS, SCF	joining comes with obligations; it must be examined whether the benefits outweigh the obligations
5. participate in specific international organizations / networks for exchange of data and information	technical expertise; output from 4	exchange of data and information with regards to biodiversity of Suriname	currently limited / short - long term	ATM in cooperation with ROGB, AdeKUS and LVV	SRD 15,000	OvS, SCF	involvement of staff of ministries and university necessary

3.5 Capacity building

This is also a supporting, additional objective and concerns the desired improved capacity that is considered necessary at a national level in order to realize the three main objectives of this action plan. Capacity is described as the capability of individuals, organizations and societies to perform their duties, solve their problems and formulate and realize objectives. In this respect a distinction is made between on the one hand individual, collective and institutional capacity and on the other hand between capacity improvement with the government, the private sector and local civil society organizations (CBO's / NGO's) and communities.

Objective 5: Capacity building

The government, the private sector and civil society involved in the policy, the management, the monitoring and the enforcement of biodiversity must be strengthened. In particularly the development of knowledge and skill is required.

Sub-objective 5.1: Generic capacity developed

In general and within various segments of society, as well as among policy makers, useful data and/or information must be available as regards biodiversity, and capacity building must be stimulated.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	educative and technical expertise, information	accessible information, curricula, training facilities	high / short term	esp. ATM, MINOV, AdeKUS, …	SRD 1,050,000	OvS, UNICEF, SCF, OvNL, CBN, SCF	revise curricula continuously, with reference to NCSA Capacity Development Action Plan

1. make information available for planning and decisions in relation to conservation of biodiversity	information about biodiversity, technical expertise, coordination	access to biodiversity related data and information	high / short term	ATM in cooperation with AdeKUS –CELOS, GLIS, SBB, ROGB, WWF Guianas, CIS	SRD 150,000	OvS, OvNL	requires good cooperation and coordination between partners
2. train teaching personnel at various educational level, especially basic level.	teaching and technical expertise	training programmes for primary and secondary education, training / teaching material for teachers	high / short term	MINOV, supported by among others AdeKUS, NIMOS, environmental NGO's	SRD 750,000	UNICEF, OvS, OvNL	important to continuously adjust the curriculum for primary and secondary education
3. establish training programmes for policymakers	teaching and technical expertise, educational expert	regular trainings for policymakers	high / short term	ATM in cooperation with ROGB, Fin, NH AdeKUS	SRD 150,000	OvS, SCF	with reference to NCSA Capacity Development Action Plan

Sub-objective 5.2: Relevant ministries and associated institutes strengthened

The government needs adjusted and additional individual and institutional capacity to properly perform tasks in relation to biodiversity. That applies to development and physical planning and the conservation of biodiversity, to bioprospecting and biotechnology and to mitigate the impact of among other things mining.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	technical, judicial and educational expertise, trained personnel	effective and functioning institutes, elaborate curricula	high to limited / short - long term	esp. ATM, ROGB, RvM, AdeKUS-CELOS, NH, …	SRD 6,555,000	OvS, IDB, GEF, WWF Guianas, SCF, CBN	weak institutes need broader support base

1. train / support planning for conservation environment (local and national)	technical expertise, consultant, political support / approval	strengthened institute for planning of environmental conservation	high to limited / mid term	RvM, ATM, ROGB	SRD 150,000	OvS, GEF, CBN	position / mandate of Planning Office must be strengthened
2. support an integrated institute for nature protection and sustainable utilization of the forest	technical and judicial expertise, political support	approved and mandated institute for integrated approach to sustainable forest use and nature conservation	high / short term	ROGB in cooperation with RvM, ATM	SRD 3,000,000	IDB	success subject to commitment by both private and public stakeholders
3. strengthen institutes for research, training, education and demonstration of responsible mining	technical and educational expertise, adequately trained personnel, consultant	improved curricula and research facilities, demonstrations of responsible mining	high / mid term	ATM in cooperation with BIS, AdeKUS-CELOS	SRD 750,000	OvS, WWF Guianas	
4. integrate sustainable utilization of the sea and marine biodiversity in curricula institutes for higher education	technical and educational expertise	subjects related to utilization of the sea and marine biodiversity included in existing curricula	high / short term	AdeKUS, LVV, RvM	SRD 1,050,000	IDB, WWF Guianas	still insufficient education at a high level about the sea and marine biodiversity
5. strengthen and professionalize institutes in charge of nature education and information	communication and technical expertise, technical information	adequate equipment and personnel with adequate previous education / experience	high / short term	ATM in cooperation with ROGB, NH	SRD 1,500,000	CBN, OvS, SCF	preferentially integrating in institute output 2

6. increase biotechnological capacity to implement CBD, by integration of biotechnology in current / new curricula			high to limited / long term	ATM ism LVV, ROGB and MINOV			
7. establish institute for biotechnology risk evaluation			high to limited / long term	ATM, ATM-NIMOS, AdeKUS			
8. strengthen OvS institutes to play their role in EIA / increase capacity for EIA	technical expertise; training, additional educated personnel	capacity for smooth and proper implementation of EIA	high / short – mid term	ATM in cooperation with NH, LVV, OW, ROGB	SRD 105,000	OvS, IDB	needs both sectoral and intersectoral approach

Sub-objective 5.3: Socially responsible entrepreneurship by companies, with due observance of green / sustainability principles

The private sector will have to develop and use its capacity for sustainable use and management of biodiversity, particularly in the tourism sector, but also in relation to the exploitation of forest products, such as wood and NTFP.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, political approval, training	trained personnel, laws / rules,	high to limited / short - mid term	esp. ATM, LVV, NH, ROGB, TCT, OW, SBF, KKF, branch organizations …	SRD 585,000	OvS, SCF, company funds	linking up with other awareness actions is of importance

1. strengthen the capacity to integrate green / sustainability principles and proceed with certification	technical expertise, training, consultant	trained personnel, aware and educated to be able to integrate green principles in operational management and to be eligible for certification	high / short term	ATM in cooperation with SBF, STS, KKF and branch organizations	SRD 150,000	OvS, SCF	NATIN and AdeKUS have already integrated these subjects in existing curricula, need for training of other personnel
2. development of laws and regulations to enhance green / sustainable practices in the private sector	judicial expertise	concept laws / rules to encourage 'green' practices in business community	high / short term	ATM in cooperation with LVV, NH, HI, TCT, ROGB, OW	SRD 45,000	OvS	involvement of staff various ministries necessary
3. approve laws / regulations to encourage green / sustainable practices in the private sector	political approval; output from 2	ratified laws and rules	high / short - mid term	RvM, Council of State and Parliament in cooperation with ATM, ROGB, LVV, NH,HI, TCT, OW	SRD 15,000	OvS	commitment by decision-makers necessary
4. assign responsibility to an institute for 'green labeling' and ensure adequate control	judicial / technical expertise, educated personnel, equipment	adequate control on the use of 'green labels'	currently limited / mid - long term	ATM in cooperation with SBS	SRD 150,000	OvS, SCF	preferentially provide a mandate to an existing institute
5. strengthen local companies to fulfil their role in EIA (increased EIA capacity)	technical expertise, training	company personnel better trained / aware of importance and procedures EIA	high / short - mid term	ATM in cooperation with SBF, KKF, branch organizations	SRD 225,000	OvS, SCF, company funds	this action is intended to go together with awareness activities

Sub-objective 5.4: Local civil society organizations and communities capable of fulfilling their role in relation to biodiversity

Local communities, community-based organizations (CBO's) and supporting NGO's have an important role to play in the (co)management of biodiversity. Mobilizing and strengthening local communities and organizations will relieve and complement the effort of the government and may increase the civil society support base.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, training, consultations, consultant	more involvement local communities, CBO's and NGO's in management	high to limited / short - long term	esp. ROGB, ATM in cooperation with NGO's, CBO's and local communities	SRD 825,000	OvS, SCF, GEF, WWF Guianas, CBN, TBI	dependent on decentralization process and involvement stakeholders
1. strengthen capacity of local communities for management and monitoring of biodiversity in their territory	technical expertise, training, consultation and deliberation, consultant	trained members from local communities who are deployed in monitoring and management	high / short - mid term	ROGB in cooperation with AdeKUS, WWF Guianas, CIS, ACT, VIDS and other NGO's, CBO's and representatives from local communities	SRD 450,000	OvS, CBN, TBI, WWF Guianas, SCF	dependent on local interest in co-management of biodiversity;
2. initiate a transition of consultation to co-management of protected areas, together with local stakeholders	technical and communicative expertise; consultations; consultant; output from 1	MoU's and work plan for co-management of protected areas	high to limited / short - long term	ROGB in cooperation with RO, ATM, NGO's, CBO's and representatives from local communities	SRD 300,000	SCF, GEF	strongly dependent on decentralization process
3. strengthen communities and CBO's to fulfil their role in EIA	technical expertise, training	exponents of local communities aware of EIA procedures	high / short - mid term	ATM, NGO's, CBO's and representatives from local communities	SRD 75,000	OvS, SCF	demands commitment by local communities and their organizations

3.6 Increasing awareness and empowerment

Increasing awareness as regards conservation and the sustainable use of biodiversity is also a supporting objective within this action plan. This will be reached by means of targeted education and communication. The intention is that as a result of the increased awareness the people and communities involved, are strengthened, feel motivated and strong enough to take up matters themselves.

Use will be made of the methods and techniques of Social Marketing and Environmental Education & Communication. This will be aimed at ensuring that a majority of both the population, social partners and policymakers will take care of the diversity of life in Suriname. A national campaign needs to be designed, which is then implemented systematically. Thereafter this campaign must be assessed to be able to determine its effect.

Use must also be made of more targeted awareness campaigns, which may contribute in an important manner to the conservation of biodiversity by changing the behaviour of local communities into the direction of sustainability. This campaign will mainly work by the adjustment of educational curricula. Curricula must especially be drafted for local communities to contribute to behavioural change. The current curricula must be evaluated and newly developed in consultation with the stakeholders. After the introduction of new curricula, the results will also have to be evaluated.

Special attention should also be paid to raising awareness within the small-scale agriculture. It will be important to make farmers and horticulturalists aware of the possible utilization of biodiversity in order to increase their income from sustainable agricultural and horticultural systems. Agrobiodiversity can play an important role herein. A similar interaction between biodiversity and offshore fisheries can be found in the fisheries sector. As regards the focus areas agriculture and fisheries, an informative and marketing campaign will have to be designed and pilot projects will have to be set up in order to demonstrate increase of sustainability and income in practice.

Objective 6: Increasing awareness and empowerment through education and communication

Education and communication are used to increase the awareness in relation to biodiversity and planning and management for the conservation of the biological and related cultural resources.

Sub-objective 6.1: National awareness increased through communication campaign

By making use of methods of Social Marketing and Environmental Education & Communication (EE&C), people can be motivated to take actions in order to preserve and to protect biodiversity. For these purposes, local expertise will have to be developed in order to carry out effective informative campaigns. In addition, environmental information and education will have to be aimed at appealing to emotions and cultural symbols that are constructed around nature and biodiversity (symbolic meanings). This differs per ethnic group, effective environmental information and education works via target group segmentation (developing specific messages for specific target groups).

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, training, consultant	trained educators, curricula, overview, programmes	high to limited / short - mid term	esp. ATM, AdeKUS, MINOV, SBF, KKF, NGO's, CBO's and local communities	SRD 1,530,000	OvS, bilateral cooperation, SCF, GEF, WWF Guianas, CI,S ACT	specifically aimed at target groups; deployment of several organizations necessary
1. conduct training social marketing and EE&C to environmental educators	communication expertise, consultant	motivated and educated workers to initiate effective informative programmes	high / short term	AdeKUS, ATM	SRD 450,000	UNICEF, SCF, bilateral cooperation between educational institutions	upgrading of existing educators necessary to make information and campaigns more effective
2. add a component social marketing and EE&C to existing curricula (AdeKUS, IOL, NATIN)	communication and educational expertise, consultation, training	integration social marketing and EE&C in existing curricula, trained teaching personnel	high / short - mid term	ATMin cooperation with MINOV, AdeKUS, IOL, NATIN	SRD 150,000	OvS, SCF, bilateral cooperation between educational institutions	existing curricula do not (yet) train people to become good educators / communicator

3. make an overview of the symbolic meanings that are constructed per ethnic group around nature and biodiversity	communication / cultural-anthropological expertise; consultations; consultant	overview symbolic meanings around nature and biodiversity	limited / mid term	ATM in cooperation with RO, NGO's, CBO's and representatives local communities	SRD 105,000	UNDP, WWF Guianas, CIS	
4. develop national campaigns to increase awareness based on target group segmentation	communication / cultural anthropological and educational expertise; consultant	programmes for various target groups (ethnic, age, …)	limited / mid term	ATM in cooperation with national media, NGO's, CBO's and representatives of local communities	SRD 600,000	OvS, GEF, CIS, ACT, WWF Guianas	programmes need to be developed up in the language of the target group, media geared to generally accepted means of communication within the target group
5. develop campaigns for the business community to increase awareness about their role and importance in the conservation of biodiversity	technical and communication expertise; consultations; consultant	programmes for business community	limited / mid term	ATM in cooperation with SBF, KKF, branch organizations	SRD 225,000	OvS, GEF, CIS, ACT, WWF Guianas	programmes need to be developed up in the language of the target group, media geared to generally accepted means of communication within the target group

Sub-objective 6.2: Raise awareness among local communities through education

This local awareness-raising can best be attained by developing educational curricula especially designed for local communities and which can contribute to behavioural change in the direction of conservation and sustainable use of biodiversity.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	various expertises, consultants	multi-media centres, curricula, material, programmes	high to limited / short - mid term	esp. RO, ATM, MINOV, ROGB, LVV, NGO's, CBO's and local communities	SRD 5,400,000	UNICEF, OvS, IDB, GEF, et al	cooperation from local communities is crucial
1.develop local multi-media centres in the local communities that encourage awareness of biodiversity and culture	technical / cultural - anthropological and communicative expertise; consultant; output from 3 previous sub-objective	multi-media centres for education	limited / mid term	RO in cooperation with ATM, ROGB, LVV, NGO's, CBO's and representatives from local communities	SRD 3,000,000	OvS, international companies	location multi-media should be selected in a strategic manner to increase efficiency
2. incorporate biodiversity and related cultural diversity in educational curricula	technical / cultural-anthropological / educational expertise; consultant	new / adjusted curricula with supporting material	high / short term	MINOV in cooperation with ATM, NGO's, CBO's and representatives from local communities	SRD 450,000	UNICEF, OvS	input from local communities is crucial
3. develop educational curricula in local languages in the course of which local expertise can be better used	linguistic and cultural anthropological expertise; consultant	environment-related curricula translated into the local language and circumstances	high / short term	MINOV in cooperation with RO, NGO's, CBO's and representatives from local communities	SRD 450,000	UNICEF, IDB	knowledge of local situation is crucial

4. promote a broad spectrum of environmental education in local communities	communication / cultural anthropological and educational expertise; consultant	programmes / material for various target groups (ethnic, age, …)	high / short term	ATM in cooperation with MINOV, RO, NGO's, CBO's and representatives from local communities	SRD 1,500,000	UNICEF, IDB, GEF, CIS, ACT, WWF Guianas	programmes need to be developed up in the language of the target group, media geared to generally accepted means of communication within the target group, input from local communities crucial

Sub-objective 6.3: Raise awareness within the agricultural and fisheries sector

Biodiversity is fundamental for the development of agriculture and horticulture, which in their turn constitute the basis for economic growth and poverty alleviation. Increasing the agro-biodiversity in agriculture and horticulture better enables the sector to be more resilient. The same applies to the fisheries sector and marine biodiversity.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, consultations, consultant	informative activities, more knowledge among target group, overviews	high to limited / short - mid term	esp. LVV, ATM, RO, ROGB, organizations of farmers and fishermen	SRD 1,740,000	EU, FAO, OvS	demands good linking up with experience of target group
1. develop and give agricultural information regarding conservation of agrobiodiversity	agrarian and educational expertise; consultant	informative activities, more knowledge among agriculturers with regard to importance agrobiodiversity	limited / mid term	LVV in cooperation with farmers organizations, RO, ATM	SRD 300,000	EU, FAO, OvS	information geared to language and context of the target groups

2. develop and give agricultural information aimed at (semi) permanent agricultural methods in the Interior	agrarian, cultural-anthropological and educational expertise; consultations; consultant	informative activities, more knowledge among farmers in the Interior about sustainable production from (semi) permanent agricultural methods	high / short - mid term	LVV in cooperation with farmers organizations, RO, AdeKUS-CELOS, representatives local communities, NGO's	SRD 450,000	EU, FAO, OvS	demonstration fields are important means of information
3. develop and give information about impact of terrestrial activities on marine ecosystems	agrarian, educational and technical expertise; consultant	informative activities, more knowledge among agriculturers (particularly in the Coastal plain) about the impact of agricultural activities on the marine environment	limited / mid term	LVV in cooperation with ATM, AdeKUS-CELOS	SRD 300,000	EU, FAO, OvS	
4. Improve information, education, training and input technology aimed at sustainable exploitation of marine biological resources by fishermen	technical expertise, marine fish and fisheries data; consultations; consultant	demonstration of technical and financially feasible methods that are sustainable and do no endanger the exploitation	high / short term	LVV in cooperation with MINOV, fishermen organizations, AdeKUS-CELOS	SRD 600,000	EU, FAO, OvS	information needs to take into account market mechanisms

5. raise awareness about laws and rules for conservation of biodiversity	technical and educational expertise, overview relevant laws and regulations as regards biodiversity in relation to agriculture, animal husbandry and fisheries; consultant	overview and explanation of laws and rules with regard to conservation of biodiversity, aimed at agriculture, animal husbandry and fisheries	limited / mid term	ATM in cooperation with LVV, ROGB, fishermen organizations, farmers organizations, AdeKUS-CELOS	SRD 90,000	OvS	regular updates necessary

3.7 Cooperation at local and international level

The objective is to collaborate to achieve the principal objectives of the CBD and the NBAP. The underlying concept is that on the one hand local problems in most cases can also best be solved locally, such as the problems that might exist between a game warden, the villagers in the surroundings of the protected area and the owners of wood and mining companies that are active in the same area. On the other hand it is impossible to solve cross-boundary problems, such as worldwide smuggling of wild animals and global climate change, at the national or local level only. Here, a cross-boundary approach is needed. Local cooperation will be achieved by local participation. Especially local communities must be given the opportunity to analyse themselves their existing situation (both with regard to the limitations and the possibilities), to identify priority problems and to develop plans themselves in order to tackle these problems, and to also implement these plans themselves, with the support of the government and others they think will be necessary in the process. International cooperation will also have to be based on full participation, meaning the participation of representatives of Suriname in discussions and processes at the regional level (CARICOM, ACTO, new South-American regional initiatives) and beyond (bilateral; global).

Objective 7: Cooperation at local and international level

Cooperation as regards planning, managing and monitoring biodiversity must be increased by also making room for participation of local stakeholders, particularly local communities and companies. Suriname should also work in a targeted manner with other countries via participation in regional and global initiatives.

Sub-objective 7.1: Local cooperation and participation communities

Local participation and cooperation needs to result in identifying and implementing activities that lead to a sustainable use of natural resources without biodiversity being threatened. First the existing situation (baseline situation) must be assessed together with the local stakeholders and only thereafter should actions be taken.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, early involvement of stakeholders, networks	overviews, support, coordination, private-public cooperation	high to limited / short - mid term	esp. ATM, ROGB, LVV, SBF, RO, NGO's, CBO's and representatives from local communities	SRD 120,000 (plus budgets of aforementioned specific actions)	OvS, private sector, NGOs	linked to other actions / current government activities
1. identify stakeholders in relation to biodiversity	technical expertise; consultations; consultant	overview of stakeholders	high / short term	ATM	SRD 15,000	OvS	is in principle part of the baseline (reference to paragraph 1.5 and 4.1)

2. work together with local communities on the planning, management, administration, enforcement of laws and rules for conservation, and the creation of employment opportunities	voluntary and informed consent of local communities, output from 1	broad support for conservation of biodiversity	high / short term	ATM, ROGB in cooperation with RO, LVV, NH, NGO's, CBO's and representatives from local communities	(included in budgets of aforementioned specific actions)		this action is linked to other actions and current government activities
3. involve the stakeholders in implementing policy and planning (for conservation)	early involvement of stakeholders in the process, facilitator, output from 1	support voor policy with regard to conservation of biodiversity	high / short term	ATM, ROGB in cooperation with RO, LVV, NGO's, CBO's and representatives from local communities	(included in budgets of aforementioned specific actions)		this action is closely linked to other actions and current government activities
4. develop and take measures to enhance and strengthen public -private cooperation (OvS with NGO's/CBO's and/or companies) on biodiversity	technical and judicial expertise	private-public implementation of projects in the area of conservation and sustainable use of biodiversity	high / short term	SBF in cooperation with ATM, ROGB, LVV, NGO's, CBO's and representatives from local communities	SRD 45,000	OvS, private sector, branch organization, representing organizations, NGOs	willingness for cooperation and mutual interest are crucial
5. develop and take measures that motivate local communities to monitor, preserve and use in a sustainable manner, biodiversity	technical and judicial expertise; early involvement of stakeholders in the process; facilitator; consultation	Motivated local communities that monitor, preserve biodiversity and use it in a sustainable manner	limited / mid term	ROGB in cooperation with ATM, RO, NGO's, CBO's and representatives from local communities	SRD 45,000	OvS, GEF	

6. promote strong local cooperation to regulate and manage (aimed at sustainability) the fisheries (at sea)	network under managers of various departments and private sector (including processors); output from 1	intersectoral and public-private consultation	high / short term	including LVV, MAS, ATM, HI, fishermen organizations	(included in budgets of aforementioned specific actions)		demands commitment by many stakeholders
7. establish a network for local cooperation in the area of training	network of institutes and organizations that conduct courses and training in the area of biodiversity; output from 1	improved coordination of activities	limited / short - mid term	MINOV in cooperation with ATM, AdeKUS, IOL, NATIN, NGO's, private institutes	SRD 15,000	OvS, private sector, branch organization, representing organizations, NGO's	demands commitment by many stakeholders

Sub-objective 7.2: International cooperation

Effective cooperation with countries and institutes in the region and beyond is necessary and this is only possible if Suriname fully participates in discussions, planning and implementation of regional and global initiatives.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	technical expertise, international meetings	overview, exchange knowledge / experience, bilateral agreements	high to limited / short-long term	esp. BUZA, relevant ministries	SRD 453,500	OvS, IDB, UNDP	demands commitment by many ministries, organizations, embassies

1. identify themes that are (currently) hard to tackle at a national level due to limited capacity	technical expertise; consultations; consultant	overview of themes / actions for which there is (too) limited national capacity	high / short term	ATM in cooperation with relevant ministries / organizations	SRD 15,000	OvS	particularly involving in the themes: sea, endangered species, disasters, biosafety, sustainable tourism
2. increase capacity of Suriname by working with countries in the region / world in the area of planning, implementation, evaluation and financing of conservation	technical expertise, attending regional and global meetings	capacity increase among policy officers / executives; Suriname gets input from network at regional and global level, exchange of knowledge and experience	high / short term	BUZA in cooperation with relevant ministries	SRD 60,000	OvS, IDB	demands commitment by various public institutes, NGO's, Embassies, regional organizations
3. participate in regional / global initiatives for the management (aimed at sustainability) of the biological resources of the sea	technical expertise, regional and global meetings	active participation in regional / global network, exchange of knowledge and experience; regional / bilateral agreements with regard to fisheries at sea	limited / mid - long term	BUZA in cooperation with LVV, ATM	SRD 75,000	OvS	demands commitment by various public institutes, NGO's, Embassies, regional organizations; close coherence with actions 2 and 5

4. draw up a plan of cooperation with countries in the region for research and monitoring in relation to biodiversity	technical expertise, regional meetings	plan of cooperation	limited / mid - long term	BUZA in cooperation with relevant ministries, AdeKUS-CELOS	SRD 60,000	OvS, ACTO	focus: CARICOM, Guianas and other Amazonian countries
5. participate in regional planning / action for protection of globally / regionally endangered species	technical expertise, attending global / regional meetings	Suriname participates in regional actions for protection of global / regional endangered species	limited / mid - ong term	BUZA in cooperation with relevant ministries	SRD 22,500	OvS, ACTO	in cooperation with IUCN, organizations for conservation biodiversity
6. develop with countries in the region joint response to disasters	technical expertise, regional meetings	joint response	limited / mid - long term	BUZA in cooperation with NCCR, relevant ministries	SRD 36,000	IDB	demands commitment by various public institutes, Embassies, regional organizations
7. develop with countries in the region joint response to cross-bordering pollution and dangerous transports at sea	technical expertise, regional meetings	regional agreed policy measures for cross-bordering pollution and dangerous transports at sea	limited / mid - long term	BUZA in cooperation with ATM, HI, OW, LVV	SRD 45,000	IDB	demands commitment by various public institutes, Embassies, regional organizations

8. develop in cooperation with the countries in the region a biosafety framework	technical expertise, regional meetings	regional biosafety framework	limited / mid - long term	BUZA in cooperation with ATM, sector ministries	SRD 45,000	OvS	demands commitment by various public institutes, Embassies, regional organizations
9. promote ecologically sustainable tourism in the region, including regional codes of conduct and training	technical expertise, regional meetings	regionally developed codes of conduct and training for sustainable tourism , participation of Suriname in regional network with exchange of knowledge and experience	high / mid - long term	BUZA in cooperation with TCT, sector organizations	SRD 75,000	UNDP, OvS	
10. promoter regional approach to training and strengthening of capacity			high / long term				
11. create new international cooperations for training and education			high / long term				

3.8 Adequate financing

The eighth objective in the NBAP concerns action that is necessary to ensure the financing of the various actions included in this action plan. This was referred to under a number of objectives in the NBS as well. These suggestions were brought together and supplemented under this eighth objective, A distinction is recognised between the possibilities of incidental financing (often by donors, project-based and time-bound) and continuous financing, based on generating a constant cash flow. Funds of particularly the GEF and other big donors

will be important for incidental financing, which can be seen as investments. These investments will be made on the basis of plans, such as this NBAP, when they are completed and accepted by the government. Funds derived from production in the various sectors mentioned earlier (in paragraphs 3.1 and 3.2.) will be important for continuous financing, which in fact will mainly have to serve to cover running costs and depreciations. It is therefore also important to encourage sustainable use of biodiversity and responsible use of other resources to prevent that important actions cannot be undertaken due to a lack of funds.

Objective 8: Adequate financing

In order to realize the other objectives of the NBS, adequate financial funds are available via acquisition of project-based and programme funds and implementing national mechanisms for fund creation and sustainable financing of activities

Sub-objective 8.1: Continuous financing by OvS, by means of targeted budgeting and subsidies

In order to be able to finance current activities, a sufficient constant cash flow needs to be generated. The OvS will have to allocate more funds to biodiversity-related activities. In addition, financial mechanisms will have to be developed and introduced to discourage pollution and degradation of biodiversity and encourage sustainable use and conservation of biodiversity.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, political support, annual reports	available funds, financing mechanisms, proposals	high to limited / short - mid term	esp. ATM, ROGB, NH, LVV, TCT, OW, RvM	SRD 135,000	OvS, SCF	partly dependent on approval / ratification environmental framework act
1. include additional biodiversity-related budgets in annual budgets of OvS	formulated actions from NBAP, political support	availability of funds for implementation biodiversity related actions	high / short term	RvM, DNA in cooperation with ATM, ROGB, NH, LVV, TCT, OW, Fin	SRD 15,000	OvS	

2. link realized activities to annual budget and submit this to RvM and DNA	annual reports and realized figures of previous years with regard to biodiversity - related activities	presentation to RvM and DNA, measurable and verifiable budgets	high / short term	ATM in cooperation with ROGB, LVV, NH, TCT, OW	SRD 15,000	OvS	
3. develop financial mechanisms to counter pollution and degradation of biodiversity	technical and judicial expertise; consultations, consultant	environmental tax / fines for pollution developed	high to limited / short - mid term	ATM in cooperation with Fin, ROGB, LVV, NH, TCT, OW	SRD 60,000	OvS, SCF	partly dependent on approval/ratification environmental framework act; generated revenues (from e.g. fines, environmental levy) need to be returned to the sector;
4. identify responsibilities and tasks that can be delegated to foundations, authorities, private enterprises	technical and judicial expertise; political support; consultations, consultant	proposals to delegate responsibilities / tasks of privatizing institutes	high / short term	ATM in cooperation with RvM, ROGB, LVV, NH, TCT, OW	SRD 45,000	OvS	thus, generating funds is also delegated; offers possibility to reduce subsidy OvS

Sub-objective 8.2: Project-based and programme financing by means of bilateral and multilateral agreements and donor funds

In addition to continuous financing for current activities, financing is necessary for interventions, one-off investments, evaluations and changes, in short, projects and programmes with a specific duration. As far as this is concerned, the international community offers many financing options, which can be used in a better manner. Bilateral and multilateral financing options exist, as well as options for financing by international NGOs. It is important to consider that in order to obtain the money from big multilateral donors such as GEF, a long project cycle needs to be started; that means that there are often years between submitting draft projects and obtaining funds.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	expertise, political support; lobby	overview, financing applications, agreements	high / short-long term	several ministries, including ATM, ROGB, Fin, BUZA	SRD 270,000	OvS, GEF	lobby needs to be done through a.o. Embassies
1. make an overview of financing possibilities and conditions and/or focus / priorities	technical expertise; consultations; consultant	overview of potential financing possibilities / conditions / priorities	high / short term	ATM in cooperation with ROGB, Fin, BUZA	SRD 30,000	OvS	inform a.o. through Embassies / lobby
2. submit financing applications to international donors / NGO's for financial and technical support in implementing biodiversity-related programmes and projects	worked out programmes and projects that are biodiversity-related; international lobby; output from 1	approved financing applications	high / short – long term	several ministries / organizations; including ATM, ROGB, LVV, NIMOS, SBB,	SRD 90,000	OvS, GEF	
3.explore possibilities financial support from bi/multilateral cooperation	political support; international lobby; output from 1	bi-/multilateral cooperation agreements	high / short – mid term	BUZA in cooperation with ATM, ROGB, LVV, NH	SRD 150,000	OvS	lobby done (a.o.) through Embassies

Sub-objective 8.3: Sustainable international financing

A new (international) development is the possibility of bi-/multilateral sustainable financing mechanisms in the course of which countries are paid / compensated for conservation and/or sustainable use of biodiversity. Examples in this respect are REDD+, revolving funds, compensation mechanisms for cross-boundary pollution. In practice, in order to be entitled to sustainable international financing, investments have to be made in a team that operates at international fora, lobbies for Suriname and develops national proposals. In practice, it may take many years before such a team is successful; the team will probably also need to be be supported by international consultants.

Desired actions	*Necessary input*	*Expected output*	*Importance / priority*	*Responsibility*	*Budget indication*	*Budget source*	*Comments*
Overview	technical expertise; consultants	overview and recommendations as regards financing mechanisms	high to currently limited / short to long term	BUZA, ATM, ...	SRD 2,445,000	OvS	the government will have to invest in a team of local experts
1. identify financing mechanisms related to biodiversity, which apply to Suriname	technical expertise; consultations; consultant	overview of relevant financing mechanisms	high to limited / mid - long term	BUZA in cooperation with ATM, ROGB, LVV, NH, OW	SRD 45,000	OvS	possible financing mechanisms for forests, water, biodiversity and contribution to global preservation; link with climate change
2. international lobbying and development of proposals	technical expertise; consultants	recommendations as regards financing mechanisms Suriname can benefit from, in relation to biodiversity	high / short - mid term	ATM in cooperation with BUZA	SRD 2,400,000	OvS	the government will have to invest in a team of local experts to lobby and prepare / work out things.

3. test some mechanisms in a pilot project and adjust these according to local standards / circumstances			currently limited / long term				
4. evaluate existing OvS structures in function of the possibility to be able to generate funds and to reinvest			currently limited / long term				

3.9 Financial overview

The overview gives a summary of the financial funds necessary for the various objectives, followed by the necessary funds per sub-objective.

Objectives / sub-objectives		Budget (SRD)	Budget source
1	**Conservation of biodiversity**	**26,670,000**	
1.1	Adjusted national laws and rules for the conservation of biodiversity within and outside protected areas	345,000	OvS, SCF, GEF
1.2	Preserve the biodiversity of Suriname in an adequate and effective national system of protected areas, and in areas beyond this system	17,715,000	OvS, GEF, SCF, IADB, FAO, CIS, WWF Guianas
1.3	Rational designation and use of land, taking into account biodiversity conservation and the impact of disasters	4,650,000	OvS, GEF, IADB and companies
1.4	Responsible mining, with minimization of damage to the environment and biodiversity, and environmental restoration	1,680,000	OvS, WWF Guianas, companies
1.5	Spread of dangerous objects, substances or organisms in natural ecosystems limited and under control	2,280,000	OvS, FAO, GEF
2	**Sustainable use of biodiversity**	**8,325,000**	
2.1	Sustainable fisheries in the marine, estuarine and inland waterways	2,115,000	OvS, WWF Guianas, FAO
2.2	Sustainable forestry – both logging and harvest of plant non-timber forest products (NTFP) - and forest restoration	1,965,000	OvS, TBI, CIFOR, IADB, WWF Guianas
2.3	Sustainable use of wildlife (terrestrial)	1,980,000	OvS, OvNL, OvVS, WWF Guianas, ACTO
2.4	Responsible tourism , particularly nature and ecotourism	615,000	OvS, SCF, EU, CIS
2.5	Responsible agriculture, causing less environmental damage	405,000	OvS, FAO
2.6	Responsible application of biotechnology	195,000	OvS, FAO
2.7	Ecosystems valued for the services they deliver	1,050,000	GEF

Objectives / sub-objectives		Budget (SRD)	Budget source
3	**Regulated access to genetic material and associated traditional knowledge, with fair and equitable sharing of benefits**	**3,255,000**	
3.1	Regulated access to genetic material in the territories of Indigenous people and Maroons, with fair and equitable sharing of derived benefits	2,220,000	OvS, GEF
3.2	Regulated access to genetic material in other areas, with fair and equitable sharing of derived benefits	480,000	OvS, GEF
3.3	Regulated access to traditional knowledge, with fair and equitable sharing of derived benefits	555,000	OvS, GEF
4	**Knowledge acquisition through research and monitoring**	**28,122,500**	
4.1	Knowledge acquired through biodiversity research (traditional knowledge and knowledge of basic biology and use)	13,910,000	OvS, GEF, SCF, FAO, TBI, ACT, WWF Guianas, CIS, big companies
4.2	Knowledge of trends in biodiversity and of natural processes and human activities that have an impact thereon	13,522,500	OvS, GEF, World Bank, UNFCCC, CBD, OvNL, UNDP, CIS, WWF Guianas, companies
4.3	Accessible national databases about biodiversity, with the results of research and monitoring	690,000	OvS, GEF, SCF
5	**Capacity building**	**9,015,000**	
5.1	Generic capacity developed	1,050,000	OvS, UNICEF, SCF, OvNL, CBN, SCF
5.2	Relevant ministries and associated institutes strengthened	6,555,000	OvS, IDB, GEF, WWF Guianas, SCF, CBN
5.3	Companies do business in a socially responsible manner, with due observance of particularly green / sustainability principles	585,000	OvS, SCF, company funds
5.4	Local civil society organizations and communities capable to fulfil their role in relation to biodiversity	825,000	OvS, SCF, GEF, WWF Guianas, CBN, TBI

Objectives / sub-objectives		Budget (SRD)	Budget source
6	**Raising awareness and empowerment through education and communication**	**8,670,000**	
6.1	National awareness-raising through communication campaign	1,530,000	OvS, UNICEF, bilateral cooperation, SCF, GEF, WWF Guianas, CIS, ACT
6.2	Raising awareness among local communities through education	5,400,000	UNICEF, OvS, IDB, GEF, CIS, ACT, WWF Guianas, international companies
6.3	Raising awareness within the agriculture and fisheries sector	1,740,000	EU, FAO, OvS
7	**Cooperation at local and international level**	**573,500**	
7.1	Local cooperation and participation communities	120,000	OvS, private sector, GEF, NGOs
7.2	International cooperation	453,500	OvS, IDB, UNDP, ACTO
8	**Adequate financing**	**2,850,000**	
8.1	Continuous financing by OvS, by means of targeted budgeting and subsidies	135,000	OvS, SCF
8.2	Project-based and programme financing by means of bilateral and multilateral agreements and donor funds	270,000	OvS, GEF
8.3	Sustainable international financing	2,445,000	OvS

4 Next steps

4.1 Phased plan

A decade ago, with the assistance of UNDP / UNEP a guideline was published to draw up a national biodiversity strategy and action plan ("*Guide to Developing a Biodiversity Strategy from a Sustainable Development Perspective*", September 2000). The phased plan mentioned herein constitutes the basis for the procedure that was also followed in Suriname. The seven steps are as follows:

1. Establishing a steering group;
2. Outlining the national biodiversity, the actors and activities;
3. Drawing up the National Biodiversity Strategy (NBS);
4. Drawing up the National Biodiversity Action Plan (NBAP);
5. Implementing the plan by the actors as identified for these purposes;
6. Monitoring and evaluation; and
7. Reporting.

It is clear that after drawing up the NBAP, which is hereby completed, the implementation should follow as well as the monitoring and evaluation thereof (during 2012-2016). This should then be completed with an assessment.

4.2 Priorities and making choices

It should also be clear that not all the activities proposed in this action plan can be implemented simultaneously. Certainly not if we keep in mind that these are additional to the regular, ongoing activities of persons assigned to implement them. Limited funds and capacity necessitate to set priorities and to make choices. The matrices in chapter 3 all include indications of the importance (high or limited) of activities, which is mainly based on the opinion of the stakeholders. High importance does not mean that the implementation is also feasible within short term. That is why in addition to the importance, a priority or sequence has been indicated, using the following categories:

- Short term: start of implementation of action preferentially within 2 years;
- Mid term: start implementation within 2 to 5 years (in most cases following other actions that precede in the short term); and
- Long term: implementation desirable after 5 years, after preceding actions.

This is, however, only an indication. In practice it will turn out that choices remain to be made as a result of insufficient funds and capacity, or maybe as a result of changing circumstances. It is difficult within the context of this action plan, to indicate now how to deal with that in the course of 2012-2016. Expediency is a very pragmatic and often successful approach, if e.g. it suddenly turns out that specific funds are made available for specific activities.

4.3 Embedding NBAP in national policy

The previous chapters indicate that the implementation of the actions demands the commitment, i.e. the involvement and active participation of several ministries (including ATM, ROGB, LVV, RO, JP, Fin), semi-governmental organizations, NGO's, CBO's, representatives from local communities and from the private sector. The current NBAP should also be embedded in the national policy, to guarantee a broad support for the implementation. The ministry of ATM can apply at least two methods to incorporate the NBAP in the national policy: in the first place fitting the NBAP within the so-called Green Development Strategy for Suriname (or other policy documents aimed at green / sustainable economic development) and in the second place fitting this within the new Development Plan.

4.4 Implementation, monitoring and evaluation

Expectations are that the speed of implementation of the proposed actions will be determined by the capacity available for these purposes in Suriname. The fact that such capacity is currently insufficiently available in Suriname, already became clear with elaborating the objective on capacity (reference to section 3.5). With many of the actions formulated in the action plan, it is assumed that consultants will be hired to assist with the implementation, often international consultants. The latter is sometimes unavoidable, but it remains very important to pay ample attention to developing national capacity, before complex activities are implemented. If this is not done, it might lead to frustration of the entire process and demotivation of the persons in charge thereof in our country.

As becomes evident from the phased plan mentioned above (reference to section 4.1), the effects, the impact of our actions, must be judged by means of monitoring and evaluation. Only then will it become clear whether the activities as implemented also had the desired effects. In this respect, the desired effects are: more effective conservation and more sustainable use of biodiversity and the fairer and more equitable sharing of the resulting benefits. For these purposes, a series of objective, measurable indicators will have to be developed, in principle per objective or even sub-objective or action. Then a minimum standard will have to be agreed on; the effects measured will have to minimally meet the standard.