



# REPUBLIC OF SURINAME

## Ministry of Labour, Technological Development and Environment



# ***NATIONAL BIODIVERSITY STRATEGY***

*March 2006*

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## Ministry of Labour, Technological Development and Environment

### *Biodiversity Steering Committee*

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This report was commissioned by the WWF Guianas Regional Program Office, and developed for the Suriname Ministry of Labour, Technological Development and Environment (ATM), the National Institute for Environment and Development (NIMOS), and the National Biodiversity Steering Committee under Agreement No. 07-2005 between UNDP/Suriname and World Wildlife Fund (WWF) as activity of the UNDP project Support to capacity building the Suriname Conservation Foundation

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## VOORWOORD

Biodiversiteit is alle op Aarde aanwezige Leven inclusief de lucht, het water en de bodem. Met andere woorden biodiversiteit heeft alles te maken met het voortbestaan van de mens en de planeet Aarde. Biodiversiteit moet gezien worden als een geschenk van GOD, waarbij de mens de expliciete boodschap heeft ontvangen, om hiermede goed en zorgvuldig om te gaan. Indien niet op een juiste wijze met de biodiversiteit wordt omgesprongen zal het voortbestaan van de planeet Aarde in gevaar komen. Voor ons land met haar rijkdom aan biologische hulpbronnen, is het behoud hiervan evenwel van cruciaal belang. In dat verband moet de formulering van de Nationale Biodiversiteit Strategie ook worden gezien.

Met deze Strategie wenst Suriname niet alleen invulling te geven aan de eerste verplichting van het Biodiversiteitsverdrag van de Verenigde Naties, maar geeft zij eveneens uiting aan de boodschap, dat zij de bescherming van de biodiversiteit ernstig opvat. De Nationale Biodiversiteit Strategie zal daarom als basis dienen voor Suriname om tot duurzame ontwikkeling te geraken en zal geïntegreerd worden in beleids- en sectorplannen, opdat hiermede het behoud, de bescherming en het duurzaam gebruik gewaarborgd kunnen worden. De betrokkenheid van allen in de samenleving is hierbij van eminent belang, dit vanwege de betekenis van het behoud en duurzaam gebruik van onze biodiversiteit voor onszelf, de wereld en het nageslacht.

In dit voorwoord wens ik de hoop uit te spreken dat elke burger van Suriname zichzelf moge terug vinden in de visie van deze Strategie en het tot hun eigen missie moge maken, teneinde Suriname's biodiversiteit te waarderen, te koesteren en duurzaam te gebruiken.

Als laatste wenst het Ministerie van Arbeid, Technologische Ontwikkeling en Milieu diegenen die een bijdrage hebben geleverd aan de strategie in welke vorm dan ook, heel veel dank te zeggen, omdat zonder hun inzet het niet mogelijk zou zijn geweest om tot finalisering van dit document te geraken. Bij name mogen genoemd worden de leden van de Biodiversity Steering Committee, de United Nations Development Programme (UNDP), World Wildlife Fund Guyana's (WWF) en de consultants Jim Tolisano, Chris Heally, Ferdinand Baal, Winston Ramautaring en als laatste Stan Malone, op wiens steun en bijstand de Biodiversity Steering Committee ten alle tijden heeft mogen rekenen.

De Minister van Arbeid, Technologische  
Ontwikkeling en Milieu,

Drs. Clifford P. Marica  
(Maart 2006)

## **FOREWORD**

Biodiversity is all life on Earth, including the air, water and soil. In other words, biodiversity is the basis for the existence of our planet Earth. Biodiversity should be seen as a gift from our creator, whom has given humankind the explicit message to keep and care for it. When one does not look after her biodiversity in a proper manner, the Earth will cease to exist. For Suriname, a country with rich genetic resources, conservation is indeed very crucial. In this perspective the formulation of the National Biodiversity Strategy should be seen.

With this Strategy, Suriname not only wishes to fulfill her commitment under the United Nations Convention on Biological Diversity, but also expresses that conservation of biodiversity is very important. The National Biodiversity Strategy shall therefore serve as the basis for Suriname's Sustainable Development. This document will be integrated in the policy- and sector plans, as to be able to protect, conserve and sustainably use biodiversity. In this process the Surinamese community should play a pivotal role, because of the significance of conservation and sustainable use of biodiversity for ourselves, the international community and our posterity.

It is therefore that I hope that the vision of the Strategy may be reflected in each and every citizen of Suriname and that they will value, foster and sustainably use Suriname's Biodiversity.

The Ministry of Labour, Technological Development and Environment wishes to express her sincere gratitude and appreciation to all who contributed; without their dedication, finalization of this document would not have been reached. A special thanks to the members of the Biodiversity Steering Committee, the United Nations Development Programme (UNDP), World Wildlife Fund Guiana's (WWF) and the consultants Jim Tolisano, Chris Heally, Ferdinand Baal, Winston Ramautaring and at last Stan Malone, on who's everlasting support, the Biodiversity Steering Committee was able to count on.

The Minister of Labour, Technological  
Development and Environment,

Clifford P. Marica  
(March 2006)

## LOCATION OF SURINAME



**MAP OF SURINAME**

## **EXECUTIVE SUMMARY**

### **Developing Suriname's National Biodiversity Strategy (2006 – 2020) and Action Plan**

#### **E.1 Introduction:**

The Convention on Biological Diversity (CBD) was signed by 150 government leaders at the 1992 Rio Earth Summit and is dedicated to promote sustainable development. The Convention recognizes that biological diversity is about more than plants, animals and micro organisms and their ecosystems – it is about people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment

Suriname's National Biodiversity Strategy (NBS) establishes the national vision, goals and strategic directions to be pursued in order to conserve and sustainably use the nation's rich biodiversity and biological resources and foster the sustainable management of its natural resources, and support the equitable sharing of the biodiversity related to services and benefits provided by the ecosystems. The NBS of Suriname provides a basis and a framework for the development of a Biodiversity Action Plan (BAP) which will identify the activities, tasks, outcomes, milestones and the responsible actors needed to implement the strategic directions. The use and management of biodiversity remains a critical element in the maintenance and development of traditional societies and an emerging modern economy.

The NBS has been prepared after study and significant consultation with stakeholders including government agencies, international and donor institutions, non-governmental organizations (NGOS), community-based organizations (CBOs) and private businesses, resulting in a national vision, principles, goals and strategic directions for the conservation of biodiversity and the sustainable development of Suriname's biological resources

#### **E.2 Nature of Suriname**

Land formation features, rather than climate, are responsible for ecological and forest diversity in Suriname, and can be categorized into five broad ecological zones:

1. The Marine Zone, including all off and near shore environments;
2. The Young Coastal Plain, including coastal beaches, estuaries, mudflats, mangrove communities, and swamp and coastal forest environments;
3. The Old Coastal Plain, including higher sandy ridges, inland swamps, wetlands and forests;
4. The Savannah Belt, including a mix of open grasslands, xerophytic (dry) forest, deciduous forest and rainforest communities occurring in intermittent and isolated bands;
5. The Interior Forests, including wet tropical lowland and sub-montane forests, some elevated massifs, and the majority of Suriname's accessible mineral resources.

Species diversity is very high in Suriname and bio-technology is in the early stages of development.

#### **E.3 Policy and Legal Framework**

A broad mix of legislation, policies and guidelines have been developed in Suriname to directly or indirectly influence plans and actions affecting biodiversity and biological resources. Article 6 of the Constitution states that, "the social objective of the state is directed towards the creation and stimulation of conditions necessary for the protection of nature and the maintenance of ecological balance".

There is enabling legislation for biodiversity protection in Suriname. The institutions responsible for enforcement of the legislation are in place and several laws have been proposed for amendment in order to achieve national development priorities and fulfill international and regional agreements, according to four International conventions of which Suriname is a party :

- The Convention on Biological Diversity,
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- The Wetlands (or Ramsar) Convention, and
- The World Heritage Convention (WHC).

The Government Declaration (Regeringsverklaring 2005 - 2010) mandates an efficient and effective approach to environmental management. The overall goal of the national environmental policy is defined as protection, conservation, improvement and rehabilitation of the quality of the environment and the establishment of sustainable development practices through:

- The development of a national environmental policy;
- The integration of the national environmental policy into the sectoral development policy;
- Formulation of laws and regulations and the incorporation of relevant aspects of ratified international environmental conventions and agreements;
- Promotion of environmental awareness;
- Promotion of sustainable production; and
- Establishment of a policy for physical planning.

In the Multi-Annual Development Plan (MDP) issues of biodiversity conservation and the sustainable use and management of biological resources will be included in the national planning.

#### **E.4 Institutions, Infrastructure, and Society in Suriname: Assets, Challenges and Opportunities for Biodiversity Conservation**

The national government system for integrated environmental management comprises:

- The Ministry of Labour, Technological Development and Environment (*Ministerie van Arbeid, Technologische Ontwikkeling en Milieu – ATM*);
- The National Council for the Environment (*Nationale Milieuraad*); and
- The National Institute for Environment and Development in Suriname (*Nationale Instituut voor Milieu en Ontwikkeling in Suriname – NIMOS*)

In addition, other departments within the various ministries have responsibilities for activities related to biodiversity protection including the private sector, NGOs and CBOs.

Indigenous peoples and Maroons are represented in a variety of community-based groups. Additionally, there are several service clubs supporting the environment through direct or indirect project works.



The Anton de Kom (ADEK) University of Suriname is also actively involved in the inventory, monitoring, and sustainable development of Suriname's biological resources.

Sustainable finance is guaranteed through the Suriname Conservation Foundation (SCF) and biodiversity conservation activities in Suriname are also supported by the international community.

### **E.5 National Biodiversity Strategy**

Suriname's NBS is based on the strengths and assets found within Suriname's natural, social, institutional and infrastructure environments.

The Vision Statement has been adopted and describes the broad future biodiversity context to be realized in Suriname as follows:

#### **The Vision Statement of Suriname's Biodiversity Strategy**

*We, the people of Suriname, value and protect our biological diversity, including all natural and cultural resources through equitable and sustainable use for present and future generations. A national commitment to Suriname's biological wealth integrating all sectors of society will allow people to experience the full benefits of sustainable management and wise use while maintaining and enhancing the diversity of the country's cultural and natural heritage.*

This statement attempts to encompass the broad range of assets, values and issues that will affect the creation of social, institutional, and environmental context in Suriname in which biodiversity conservation represents a core tenet of national policy.

Several principles that frame the strategic objectives have been developed. These principles include the following:

- *Incorporate biodiversity, cultural and nature conservation measures and values into national development plan, sector plans, business plans and practices.*
- *Establish and disseminate a clearly articulated and enforced national commitment to biodiversity conservation and inform society.*
- *Establish more equitable sharing of natural resources and their benefits.*
- *Create opportunities for existing and new industries to operate from sustainable development principles.*
- *Establish the financial and human resources to achieve and sustain the biodiversity vision.*

- *Improve the capacity of people to value socially, economically and spiritually, and understand the benefits of all forms of biodiversity (including, for example, the rich diversity in agricultural systems).*
- *Education system that benefits awareness on biodiversity issues and the rich cultural heritage for all in Suriname, with special attention for all communities from the interior.*
- *Implement goal 7 of the millennium development goals (MDG) in order to contribute to the reduction of poverty*
- *Biodiversity conservation approach in the development of access to the interior.*
- *Strengthen the capacity and opportunity of residents and visitors to experience nature.*
- *Diminish or eliminate the threats from environmental pollution.*
- *Develop new and improved communication methods.*

Each of these principles is intended to provide guidance to decision-makers, developers, and citizens in support of efforts to achieve the stated biodiversity vision for Suriname.

The guiding principles have been used to develop corresponding goals for the Suriname NBS.

## The Goals of Suriname's Biodiversity Strategy

**Goal 1:** *Biodiversity will be conserved in Suriname through protection and enhancement of habitat and species at local, regional and national scales.*

**Goal 2:** *The sustainable uses for biological, cultural and natural resources will be enacted in local and national economies.*

**Goal 3:** *Research and education will be applied to create access to environmentally sound and safe developments, transfer, handling and use of biotechnology and modified organisms, and increased benefit sharing among all citizens for these resources.*

**Goal 4:** *Access to genetic resources and the associated traditional knowledge and equitable benefit-sharing will be regulated and monitored.*

**Goal 5:** *Institutional capacity will be enhanced to sustainably manage and monitor biodiversity.*

**Goal 6:** *Education and communication opportunities will be strengthened to improve public awareness of biodiversity, cultural and nature conservation planning, management and monitoring at local and national levels.*

**Goal 7:** *Local participation by communities, scientific community and businesses in biodiversity planning, management and monitoring will be enhanced as well as participation with other countries, by strategic alliances with members of, among others; the Amazon Cooperation Treaty, SIDS and CARICOM*

Each goal aims to concisely describe the purpose and values reflected in the NBS.

Each goal can also be linked to specific criteria and articles outlined in the Convention on Biodiversity (CBD).

The directives concisely state the desired changes or future conditions that can be achieved in specific social or institutional sectors to ensure immediate and long-term conservation of biodiversity and associated resources and ecological dynamics. Each strategic directive aims to guide the preparation of the Action Plan.

### **E.6 Next Steps: Formulation of an Action Plan**

The Action Plan will be formulated within a specific period of time (9-12 months), and will reflect a consensus perspective by a broad stakeholder group.

The action planning process will be facilitated by NIMOS under the guidance of Ministry of ATM and the Biodiversity Steering Committee (BSC), and will include regional workshops with representatives from government (e.g.: PLOS/SPS, RGB/SBB/LBB, LVV, NH), relevant NGOs, CBOs, international organizations, coastal and interior communities, and businesses with a direct or indirect interest in biodiversity conservation in Suriname.

The National Biodiversity Strategy and Action Plan (NBSAP) will serve to guide the government, institutions and international agencies and donors, NGOs, CBOs, private sector (businesses), and other groups and individuals acting to develop the economy and manage the natural resource base of Suriname in a manner that sustains the biological and cultural resources.

***PART I: INTRODUCTION***

## 1.0 Introduction: Developing Suriname's NBSAP

Suriname's National Biodiversity Strategy (NBS) establishes the national vision, goals and strategic directions to be pursued in order to conserve and sustainably use the nation's biodiversity and biological resources. The NBS of Suriname provides a basis and a framework for the development of a Biodiversity Action Plan (BAP) which will identify the activities, tasks, outcomes, milestones, responsible actors to implement the strategic directions identified in Chapter 6 of the NBS. The integrated National Biodiversity Strategy and Action Plan (NBSAP) will ensure the conservation of Suriname's rich biological diversity, foster the sustainable management of its natural resources, and support the equitable sharing of the biodiversity related services and benefits.

### 1.1 What is Biodiversity?

Biological diversity or biodiversity refers to the variety of life forms found on earth, including the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form. This living wealth is the product of hundreds of millions of years of evolutionary history. The process of evolution formed a dynamic pool of living diversity: it increases when new genetic variation is produced, a new species is created or a novel ecosystem formed; it decreases when the genetic variation within a species decreases, a species becomes extinct or an ecosystem complex is lost. The concept of evolution emphasizes the interrelated nature of the living world and its processes.

Biological diversity is usually considered at three different levels: genetic diversity, species diversity and ecosystem diversity.

**Genetic diversity** refers to the variety of genetic information contained in all of the individual plants, animals and micro-organisms. Genetic diversity occurs within and between populations of species as well as between species.

**Species diversity** refers to the variety of living species.

**Ecosystem diversity** relates to the variety of habitats, biotic communities, and ecological processes, as well as the tremendous diversity present within ecosystems in terms of habitat differences and the variety of ecological processes.

### 1.2 Biodiversity and Society

Human beings are dependent on fundamental biological systems and processes for their sustenance, health, well-being and enjoyment of life. Humanity derives all of its food and many medicines and industrial products from the wild and domesticated components of biological diversity. Biotic resources also serve recreation and tourism, and underpin the ecosystems which provide us with many services.

While the benefits of such resources are considerable, the value of biological diversity is not restricted to these. The enormous diversity of life is of crucial value and appears to give greater resilience to ecosystems and organisms. Resilience represents the capacity of an ecosystem to recover from significant disturbances, and many scientists believe that more diverse ecosystems have greater resilience.

Generally, benefits arising from the conservation of components of biological diversity can be considered in the following three groups:

- **Ecosystem Services:** The processes by which the environment produces resources that we often take for granted such as clean water, timber, and habitat for fisheries, and pollination of native and agricultural plants can be seen as “services” provided by healthy ecosystems. The services provided by ecosystems include the moderating of weather extremes and their impacts; seed dispersal; drought and flood mitigation; protection from the sun’s harmful ultraviolet rays; soil fertilization; protecting stream and river channels and coastal shores from erosion; and detoxifying and decomposing wastes.
- **Biological Resources:** Ecosystems and their component elements represent the natural wealth of Suriname. Food and fiber production, wood products, potable water, energy supplies, pharmaceutical materials, and other resources are extracted from Suriname’s natural areas, and are the foundation of a significant portion of the nation’s economy.
- **Social benefits:** Biodiversity has important social and cultural values. Areas rich in biodiversity provide important sources of scientific research, education, and serve as baseline from which we can monitor changes in the environment. Biologically rich areas are also important centers of recreation and improve the quality of life. The conservation of biological diversity can also be important to sustain cultural identity, and emotional and spiritual well being. Section 2.0 of this NBS elaborates the intricate and important relationship that has evolved between people and biodiversity in Suriname.

### **1.3 How Suriname’s National Biodiversity Strategy was Prepared**

The following documents provided the framework and essential data resources to assist in the preparation of Suriname’s NBS: the draft National Biodiversity Strategy documents developed in 1998 and revised in 2000, the speech of the Minister of Labour, Technological Development and Environment, H.E. Clifford P. Marica at WSSD (2002), the Draft National Biodiversity Action Plan of 2002, The Draft National Environmental Action Plan (NEAP), the Guyana Shield Conservation Priority Setting Workshop organized by Conservation International, IUCN-Netherlands Committee and UNDP in 2000, the Conservation Action Plan 2001-2005 and the draft Country Environmental Assessment prepared in 2005. The Forest Policy (2003) published in 2005 by the Ministry of Natural Resources, the Agricultural Sector Plan prepared by the Ministry of Agriculture, Animal Husbandry and Fisheries (LVV), the 5 draft reports on the Non-urban Environmental Sector (i.e. the Main Report, Marine Coastal Zone Management, Protected Area and Wildlife Management, Forest and Freshwater Resources and Mineral Resources) and the National Biosafety Framework (2005). These documents were developed through extensive analysis of existing data on biodiversity in Suriname, and consultation with institutions, groups and stakeholders affected by policy and management decisions pertaining to biodiversity resources in Suriname and/or the Guianas.

With support from the UNDP, the Ministry of Labour, Technological Development and Environment (ATM) contracted WWF Guianas to assist in developing the NBS for Suriname. WWF, in turn, with approval of ATM and UNDP,) recruited a team with international and national experts to develop the NBS in close consultation with key stakeholders.

The NBS team incorporated relevant data from these earlier documents and strategies into a revised NBS structure and content. The team also updated information and incorporated new data based on a review of recent literature; formal and informal interviews, meetings, and consultations with policymakers, project managers, businesses, communities and other relevant stakeholders.

A hearing to provide stakeholders with an overview of the NBS completion process and to foster their inputs was carried out on August 31, 2005, with individuals, institutions and organizations representing various sectors of Suriname society. A draft Biodiversity Vision was developed during this hearing, and participants had an opportunity to assess the methodology and format being used to finalize the NBS. A draft discussion paper was prepared after the completion of this hearing to facilitate wider stakeholder contributions to the NBS process, and this document was circulated to approximately 120 individuals representing key stakeholders groups and institutions in the country. A formal workshop to validate the Biodiversity Vision and to establish goals and strategic directions for the NBS was carried out October 24-25, 2005 in Paramaribo.

#### **1.4 The Structure and Content of the Strategy**

The National Biodiversity Strategy for Suriname is based on the relationship between people and the natural systems of which they are a part of. Chapter Two describes the strategy that will be enacted to ensure that biodiversity and biological resources are sustained for future generations. The strategy is based on a broad vision statement that summarizes the future conditions to be achieved through biodiversity conservation in Suriname. This vision statement is supported by basic principles that can guide the effective implementation of the NBS. The vision statement and associated implementation principles are used to establish six goals that can be pursued to fulfill the long-term vision. Each goal is linked to specific principles established in the Convention on Biodiversity. Strategic directions then provide more specific guidelines to permit the achievement of each goal.

In Chapter Three the steps to be followed in the formulation of the National Action Plan are mentioned.

#### **1.5 Moving From Strategy to Action**

The draft NBS document serves as the framework from which the national biodiversity action planning process will be carried out. The completed Action Plan will identify direct actions that can be implemented to take advantage of Suriname's natural, social and infrastructure assets, and minimize, mitigate or avoid risks or obstacles to each objective identified in the NBS document. The direct actions outlined in the Action Plan will include:

- A description of the expected results from the action;
- A list of each task that must be completed to achieve these results;
- Identification of where the action will be carried out;
- Identification of who will be responsible for implementation of the action, and who will provide backup support to complete each task;
- A schedule to show when each task and the overall action will be carried out and when results can be expected;
- Identification of the group or institution to monitor and evaluate the results; and
- Estimated costs and potential funding sources.



An effort will be made to plan realistic actions which are technically and financially achievable within the asset limitations of the Suriname context. The NBS action planning process will be completed by NIMOS in 2006 with active participation from a wide stakeholder audience.

## ***PART II: STRATEGY: Developing Suriname's National Biodiversity Strategy (2006 – 2020)***

### **2.0 National Biodiversity Strategy 2006 - 2020**

#### **2.1 Assumptions in the management of the biodiversity and Suriname's Future**

The Convention on Biological Diversity (CBD) was signed by 150 government leaders at the 1992 Rio Earth Summit and is dedicated to promote sustainable development. The Convention recognizes that biological diversity is about more than plants, animals and micro organisms and their ecosystems – it is about people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment.

Suriname has according to the Charter of the United Nations and the Declarations of the International Law, the sovereign right to exploit her own natural resources based on its own environmental policy, as well as the responsibility to assure that activities that fall under its jurisdiction or under its supervision, cause no damage to the environment of other States or areas that are not part of any national jurisdiction. Recognizing that sustainable-, economic- and social development and eradication of poverty are the first priorities for Suriname.

Suriname's NBS is based on the strengths and assets found within Suriname's natural, social, institutional and infrastructure environments as the foundation of an achievable National Biodiversity Strategy. Assets express the elements of Suriname's society, culture and environment that produce successful results. They represent behavior, attitudes, resources and practices that are already working well or have the potential to be used to create positive and optimal results.

The NBS planning process acknowledges the many assets or strengths available to confirm the proposed vision and goals, and frame the strategic objectives to realize these goals. Risks, threats and other limitations that could constrain Suriname from achieving its biodiversity goals and objectives have been identified. The analysis of assets is then used to determine how these constraints can be overcome or avoided altogether. Implementation period 2006 to 2020.

#### **2.2 A Biodiversity Vision for the People of Suriname**

The National Biodiversity Strategy (NBS) planning team developed a Draft NBS Vision Statement. The Vision Statement concisely describes the broad future biodiversity context to be realized in Suriname. The Vision Statement is the product of a participatory process in which a wide group of stakeholders were given an opportunity to contribute their ideas and language to elaborate this desired future context.

Contributions from the participants in the workshops in August and October 2005 and subsequent review and consultation have resulted in the following Draft Biodiversity Vision Statement:

### **The Vision Statement of Suriname's Biodiversity Strategy**

*We, the people of Suriname, value and protect our biological diversity, including all natural and cultural resources through equitable and sustainable use for present and future generations. A national commitment to Suriname's biological wealth integrating all sectors of society will allow people to experience the full benefits of sustainable management and wise use while maintaining and enhancing the diversity of the country's cultural and natural heritage.*

This statement attempts to encompass the broad range of assets, values and issues that will affect the creation of social, institutional, and environmental context in Suriname in which biodiversity conservation represents a core tenet of national policy.

### **2.3 Principles to Guide the Implementation of the NBSAP in Suriname**

The Visioning Exercise carried out in the August and October 2005 workshops established several principles that frame the strategic objectives developed for the NBS document. These principles include the following (in no particular order):

- *Incorporate biodiversity, cultural and nature conservation measures and values into national development plans, sector plans, business plans and practices.*
- *Establish and disseminate a clearly articulated and enforced national commitment to biodiversity conservation and inform society.*
- *Establish more equitable sharing of natural resources and their benefits.*
- *Create opportunities for existing and new industries to operate from sustainable development principles.*
- *Establish the financial and human resources to achieve and sustain the biodiversity vision.*
- *Improve the capacity of people to value socially, economically and spiritually, and understand the benefits of all forms of biodiversity (including, for example, the rich diversity in agricultural systems).*
- *Education system that benefits awareness on biodiversity issues and the rich cultural heritage for all in Suriname, with special attention for all communities from the interior.*
- *Implement goal 7 of the Millennium Development Goals (MDG) in order to contribute to the reduction of poverty.*
- *Biodiversity conservation approach in the development of access to the interior.*

- *Strengthen the capacity and opportunity of residents and visitors to experience nature.*
- *Diminish or eliminate the threats from environmental pollution.*
- *Develop new and improved communication methods.*

Each of these principles is intended to provide guidance to decision-makers, developers, and citizens in support of efforts to achieve the stated biodiversity vision for Suriname. The principles also represent a specific area of need or concern at a national or local level, and can serve as a framework for creating specific strategic objectives within the broader strategy.

## **2.4 Goals of the NBSAP**

The guiding principles have been used to develop corresponding goals for the Suriname NBS. Each goal aims to concisely describe the purpose and values reflected in the NBS in a way that inspires action to achieve strategic NBS objectives. The goals developed for the Suriname NBS include the following:

Each goal can also be linked to specific criteria and articles outlined in the Convention on Biodiversity (CBD). These criteria and articles serve to further elaborate the intent and spirit of the goal.

The following page diagrams the vision and associated goals for biodiversity conservation in Suriname.

## Biodiversity Vision and Goals of Suriname's National Biodiversity Strategy and Action Plan

We, the people of Suriname, value and protect our biological diversity, including all natural and cultural resources through equitable and sustainable use for present and future generations. A national commitment to Suriname's biological wealth integrating all sectors of society will allow people to experience the full benefits of sustainable development while maintaining and enhancing the diversity of the country's cultural and natural heritage.

**Goal 1:**  
Biodiversity will be conserved in Suriname through protection and enhancement of habitat and species at local, regional and national scales.

**Goal 2:**  
The sustainable uses for biological cultural and natural resources will be enacted in local and national economies.

**Goal 3:**  
Research and education will be applied to create access to environmentally sound and safe developments, transfer, handling and use of biotechnology and modified organisms, and increased benefit sharing among all citizens for these resources.

**Goal 4:**  
Access to genetic resources and the associated traditional knowledge and equitable benefit-sharing will be regulated and monitored.

**Goal 5:**  
Institutional capacity will be enhanced to sustainably manage and monitor biodiversity.

**Goal 6:**  
Education and communication opportunities will be strengthened to improve public awareness of biodiversity, cultural and nature conservation planning, management and monitoring at local and national levels.

**Goal 7:**  
Local and regional participation by communities, businesses and governments in biodiversity planning, management and monitoring will be enhanced.

## 2.5 Goals and Strategic Directions

The participants in the October 2005 workshop identified a set of Strategic Directions that will guide the design and implementation of Suriname's NBSAP. The directives concisely state the desired changes or future conditions that can be achieved in specific social or institutional sectors to ensure immediate and long-term conservation of biodiversity and associated resources and ecological dynamics. Each directive aims to guide the preparation of the Action Plan which will identify specific tasks to be undertaken to produce measurable conservation results within a specific period of time, and will reflect a consensus perspective by a broad stakeholder group. The Strategic Directives thus form the foundation that will be used to complete the Action Planning phase of the National Biodiversity Strategy.

### 2.2.1 Goal 1: Conserve Biodiversity

*Biodiversity will be conserved in Suriname through protection and enhancement of habitat and species at local, regional and national scales.*

#### CBD Articles pertaining to Goal #1

8(a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;  
(b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;

8(b) Monitor, through sampling and other techniques, the components of biological diversity identified pursuant to subparagraph (a) above, paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use;

8(c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;

8(d) Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;

8(f) Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies;

9(c) Adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;

The CBD states that *in-situ* conservation, that is, conservation within natural habitats, is a fundamental requirement for the conservation of biodiversity. Suriname has already begun the establishment and management of a diverse network of nationally protected areas as parks, reserves and related classifications. This elaborated system of protected areas will be strengthened and expanded nationally and locally as is deemed appropriate within national economic and social development strategies. Areas conserved include unique or vulnerable ecosystems and critical habitats for rare, threatened, endangered and endemic species, as well as species and genetic resources that are of economic or scientific interest. To strengthen and advance the establishment of protected areas, the following strategic directions are proposed:

## **Strategic Directions for Goal #1**

### **Manage and Maintain Wild Species and Their Habitats**

- Evaluate and revise existing laws, and draft, enact and promulgate new laws and rules to ensure that policies relating to the conservation of habitat and species nationally and locally are clear and enforceable.
- Complete an inventory of the biological characteristics of interior ecosystems in Suriname following and expanding the work already completed in the savanna areas and the coastal zone.
- Provide public education for local communities in biodiversity conservation, tourism sector and hunters.

### **Strengthen Research and Monitoring Programmes**

- Promote research and inventory programmes to increase knowledge of species diversity; understanding of their biology and ecology; and the impacts of human activities on species and their habitats.
- Implement identification and monitoring programmes to determine and establish sustainable harvest levels for wild flora and fauna; and establish threshold levels which, when exceeded, result in remedial actions.
- Create databases of the following:
  - organizations, institutes, government organizations and NGOs directly or indirectly engaged in biodiversity conservation measures;
  - local and international donor organizations providing funding or other support for biodiversity conservation, including a list of active and proposed projects;
  - biodiversity research projects and results
  - national scientific community

### **Control Exotic and Invasive Species**

- Strengthen measures to reduce and eliminate the release of harmful substances that degrade ecosystems and destroy wildlife.
- Develop guidelines for species re-introduction and for the eradication and monitoring of alien invasive species.
- Require risk assessment of species prior to granting an import permit and institute management assessments for importation.
- Improve management and strengthen enforcement capacity to implement quarantine control measures in order to control unintentional introductions at ports of entry.

## **Protected Area Management**

- Introduce specific guidelines for efficient and effective management in the existing protected areas in Suriname through operational management plans
- Expand existing protected areas and develop new ones to establish full representation of all ecosystem types found in Suriname.

## **Strengthen Policies and Legal Mandates to Protect Species and Habitats**

- Strengthen the capacity of government institutions responsible for the control and enforcement of biodiversity measures.
- Complete an inventory of international treaties and obligations pertaining to in situ and ex situ biodiversity conservation and finalize ratification where needed.
- Ensure the collaborative involvement of local communities in all aspects of biodiversity conservation planning, management, administration, enforcement, and particularly through increased employment opportunities in conservation related activities.
- Create the active involvement and collaboration with stakeholders with regard to policy measures and planning.
- Build the technical and management capacity of NGOs, CBOs, institutes and local communities to manage and monitor changes in wild species populations and habitats.
- Facilitate collaboration among government, NGO, CBO, education and private business entities directly or indirectly engaged in the protection of biodiversity.
- Establish a national mechanism to monitor and enforce laws, policies and mandates.
- Provide training and technical support for environmental conservation planning at local and national scales, and implementation and enforcement of the Suriname Planning Law.
- Engage regional and international organizations to build national and local capacity to plan, manage, evaluate and finance conservation projects and programmes.

### **2.2.2 Goal 2: Sustainable Use of Biological Resources**

***The sustainable uses for biological, cultural and natural resources will be enacted in local and national economies.***

#### CBD Articles pertaining to Goal #2

8(e) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;

10(e) Encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources.



The CBD defines "*sustainable use*" as "the use of components of biological diversity in a way and at a rate that does not lead to the long term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations". The Suriname NBS is crafted from the perspective that the sustainable use of biological resources and ecosystems is essential to the well being of present and future members of society. The concept of sustainable use and development, as applied in this strategy, is that the basic living standards of the people of Suriname should be improved to a level where material, social and spiritual needs are fully met without depleting renewable natural resources and degrading the environment. However, the NBS recognizes that the practice of sustainable use of biological resources is difficult to achieve in developing countries such as Suriname where poverty remains an underlying cause of the unsustainable use of natural resources. Limited access to education, infrastructure, finances and collaborative resources constrains the evaluation, adaptation and adoption of land and resource use practices that will create an ecologically sustainable social and economic environment. Achieving the sustainable use of Suriname's biological resources and its diverse ecosystems will require the development and implementation of a broad range of management practices. The following overall strategic directions are proposed to facilitate this process:

## **Strategic Directions pertaining to Goal #2**

### **Agriculture and Land Use Planning**

- Improve land use planning practices by national and local government, NGOs and CBOs applying successful existing initiatives such as GLIS, and the monitoring and enforcement of implemented actions.
- Optimize the sustainable use of agricultural lands through a reduced use of pesticides, promotion of organic agriculture, and soil and water conservation practices.
- Control and monitor the trade and use of alien and domestic species and varieties for flora, fauna, and biological organisms.
- Review current agricultural policies to determine any impediments to sustainability.
- Review existing agricultural extension services, increase training, and initiate education and awareness campaigns on the need for conservation and sustainable use of biological resources.
- Explore the benefits of maintaining and using locally developed crops and livestock breeds.
- Establish and enforce land zoning and control measures to prevent expansion of agriculture into inappropriate areas thereby protecting watersheds, forests and other relevant areas.
- Develop and promote outreach services to strengthen the traditional permanent agricultural practices of Maroon and Indigenous communities.

## **Sustainable Use and Management of Marine resources**

- Apply the results from research and demonstration of sustainable resource use and harvest to improve the management and protection of marine resources in the Exclusive Economical Zone (EEZ).
- Increase understanding of fishermen and others involved in the harvesting of marine resources of the need for sustainable use of marine resources, through extension services, education, training and technology transfer.
- Implement the integrated coastal zone management plan through relevant agencies, local communities and conservation organizations.
- Strengthen local and regional collaboration to ensure effective monitoring and enforcement of fisheries conservation rules and management programmes.
- Participate in regional and global initiatives on the management of marine biological resources and seek financial and technical assistance to increase capacity to manage these resources.
- Promote and raise awareness of the impact of land-based activities on marine biodiversity.

## **Sustainable Use and Management of Forest Resources**

- Continue to update the inventory and description of forest lands, including inventories of non-timber resources and forest biodiversity.
- Strengthen enforcement to better control illegal harvesting of timber and other forest products, and to prevent the illegal conversion of forested areas to non-forest use.
- Promote further research on sustainable forestry management systems and investigate ways and means to add value to forest resources.
- Improve and expand programmes to rehabilitate degraded forest areas and ensure the implementation of an effective system of reforestation.
- Review and revise existing laws pertaining to the allocation, management, monitoring and enforcement of forest resource development.
- Implement a strong Forest Management Authority, and the relevant infrastructure and institutional capacity.
- Implement the national forestry policy, and develop a strategic forestry action plan for all forest areas.

## **Mining**

- Review and strengthen laws and rules that determine the location, implementation, monitoring and enforcement of mining.

- Incorporate and enforce regulations for rehabilitation of mined out areas in mining licenses.
- Develop national standards for monitoring Biodiversity and environment in mining areas with involvement of all stakeholders.
- Promote and enforce the development and promulgation of ecologically mining and mineral development practices
- Strengthen and expand national and local institutes and training centers providing research, education and demonstrations of mine reclamation and sustainable mining practices.
- Develop clear guidelines for the conservation of biodiversity and the sustainable use of biological resources in the mining sector and strengthen monitoring and enforcement activities.
- Ensure that pre-mining impact assessment studies and inventories of flora and fauna are completed in proposed mining and quarrying areas.
- Develop and implement plans supporting national and local responses to potential natural and other disasters.

## **Tourism**

- Strengthen the capacity of the tourism sector to apply and expand the sustainable development of tourism infrastructure and services that support sustainable land use and nature conservation.
- Develop and implement guidelines and codes of conduct for ecotourism operators.
- Promote ecologically sustainable tourism in the region, including developing regional codes of conduct for tour operators, and convening appropriate training courses.

### **2.2.3 Goal 3: Facilitate Access to Biological Resources to Promote Equitable Developments in Biotechnology and Safe Handling and Transport of Genetic Materials**

*Research and education will be applied to create access to environmentally sound and safe developments, transfer, handling and use of biotechnology and modified organisms, and increased benefit sharing among all citizens for these resources.*

#### CBD Articles pertaining to Goal #3

8(g) Establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health;

9(b) Establish and maintain facilities for ex-situ conservation of and research on plants, animals and micro-organisms, preferably in the country of origin of genetic resources;

15(1). Each Contracting Party, recognizing that technology includes biotechnology, and that both access to and transfer of technology among Contracting Parties are essential elements for the attainment of the objectives of this Convention, undertakes subject to the provisions of this Article to provide and/or facilitate access for and transfer to other Contracting

Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.

15(2). Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Articles 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights.

15(7). Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms.

19(1). Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, to provide for the effective participation in biotechnological research activities by those Contracting Parties, especially developing countries, which provide the genetic resources for such research, and where feasible in such Contracting Parties.

19(2). Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms.

The development of biotechnology and the use of biological organisms for social and economic development have experienced limited research and development in Suriname. However, the extensive biological resources suggest that this industry could experience significant growth in the future. Government, NGO, and private businesses exploring biotechnology options have an opportunity to proceed cautiously with the development of this sector, and the following strategic directions are encouraged to ensure the safe and responsible use of biotechnological and modified organisms:

### **Strategic Directions pertaining to Goal #3**

- Establish, equip and empower a research, training and outreach institute addressing biotechnology risk analysis and management.
- Develop mechanisms for stakeholder participation in all access and benefit sharing discussions to address concerns, risks and opportunities from the development of biotechnology and biological resources, and establish policies and legislation governing access and marketing of these resources.
- Identify existing legal, policy and administrative measures to strengthen the review and assignment of access and benefit-sharing for biological resources and biotechnology, including intellectual property rights regimes to address ownership issues, and assign institutional responsibilities.
- Develop Material Transfer Agreements for commercial and scientific research to facilitate access to genetic resources whilst ensuring equitable sharing of any benefits which may arise.

- Increase capacity to use and develop appropriate technologies that will assist in implementing the requirements of the Convention.
- Enact and enforce law and policy pertaining to the use, technology transfer and trade of living genetic modified organisms (GMO's).
- Enact and enforce law and policy to protect the use and transfer of traditional knowledge and use pertaining to biological resources and biotechnology.
- Strengthen institutional capacity in public and private organizations involved in the development and application of biotechnology in order to develop appropriate procedures and measures for conducting risk assessment and management concerning the use and release of living modified organisms (LMO's).
- Provide public education on the uses of LMO's, especially in the area of agriculture, thereby increasing public understanding of potential benefits and adverse effects of LMO's.

**2.2.4 Goal 4: *Access to genetic resources and the associated traditional knowledge and equitable benefit- sharing will be regulated and monitored.***

**CBD Articles pertaining to Goal # 4:**

8(j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices

**Strategic Directions pertaining to Goal #4**

- Establish new legislation regarding the protection of traditional knowledge, lifestyles, innovations and practices of indigenous peoples and maroons communities and other local communities.
- Develop a national strategy for fair and equitable sharing of the benefits arising from traditional knowledge use associated to biodiversity.
- With the approval and involvement of the holders, develop a traditional knowledge databases for monitoring purposes.

## **2.2.5 Goal 5: Enhance Resources Management Capacity**

*Institutional capacity will be enhanced to sustainably manage and monitor biodiversity.*

### CBD Articles pertaining to Goal # 5

8(b) Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

9(c) Adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;

10(a) Integrate consideration of the conservation and sustainable use of biological resources into national decision-making;

14.1(a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures;

14.1(b) Introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account;

The government, NGO, CBO educational and private sector organizations directly and indirectly engaged in the planning, administration, management and enforcement of biodiversity conservation measures must develop and strengthen the skills and infrastructure necessary to implement and enforce proposed policies and actions. Achieving goal #4 will involve developing training opportunities for government and non-governmental institutions and individuals; creating the financial mechanisms necessary to equip and support national and site-based field operations for project implementation; developing validated data bases and information to support planning and decision-making; and confirmation of the legal authority to promote, develop, monitor and enforce compliance with the mandates of the NBSAP. The following strategic directions can facilitate the achievement of this goal:

### **Strategic Directions pertaining to Goal # 5**

#### **Institutional Strengthening**

- Establish, equip and empower independent parastatal organizations with the capacity and authority to enforce public law and policy pertaining to national and local biodiversity conservation measures.
- Strengthen the understanding by government personnel, NGOs, CBOs, and individual citizens of national law and policy pertaining to biodiversity conservation through improved public awareness campaigns, education and training.
- Increase the human capacity and capital resources to prepare, evaluate and implement environmental impact and risk assessments.
- Encourage private sector participation in the conservation and sustainable use of biological resources by developing economic incentive schemes.

- Integrate the NBSAP recommendations into existing and proposed laws, plans, and policy statements.

### **Training and Skills Development**

- Establish the financial and technical resources necessary to train and equip staff of public and private institutions engaged in the administration, management and enforcement of biodiversity conservation projects and programmes.
- Develop training programmes and opportunities for teachers and instructors at the university, technical, secondary school, teachers training college, forestry training centre, and related educational centers through scholarships, curricula development and external technical support.
- Ensure that adequate facilities and instruction are in place to support training and education in the conservation and sustainable use of biodiversity for government staff, including training and evaluation opportunities for legislators, policymakers and other national and local decision-makers.
- Strengthen collaboration among education institutions, resource management agencies, and the private sector to improve training programmes in monitoring, ecological and resource management, biophysical inventory, data management, multidisciplinary research, environmental education, and the management of protected areas.
- Develop strengthened local and/or international collaboration in identifying training opportunities.

### **Data Collection and Management**

- Establish a national committee, including representatives from Government, NGOs, CBOs, educational institutions and private businesses to improve the technical data available to support conservation planning and decision-making.
- Promote the creation of biological databases that are readily accessible by all stakeholders.
- Develop and maintain a nationally and locally accessible database of funds, technical assistance and other resources available to support biodiversity conservation activities.

### **Monitoring and Enforcement**

- Design a comprehensive biodiversity monitoring program, including standards, methodologies and monitoring intervals.
- Promote collaboration among national, regional and international institutions involved with biodiversity identification and monitoring.
- Provide incentives to communities to promote biodiversity monitoring, conservation, and sustainable use activities.

## **2.2.6 Goal 6: Public Awareness, Education and Community Empowerment**

*Education and communication opportunities will be strengthened to improve public awareness of biodiversity, cultural and nature conservation planning, management and monitoring at local and national levels.*

### CBD Articles pertaining to Goal #6

12(a) Establish and maintain programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components and provide support for such education and training for the specific needs of developing countries;

13(a) Promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes;

17.1. The Contracting Parties shall facilitate the exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity, taking into account the special needs of developing countries. Such exchange of information shall include exchange of results of technical, scientific and socio-economic research, as well as information on training and surveying programmes, specialized knowledge, indigenous and traditional knowledge. It shall also, where feasible, include repatriation of information.

Promoting awareness and understanding of the roles and values of Suriname's biodiversity and cultural issues and desired public actions are essential to achieve the effective implementation of the CBD and NBSAP. It is particularly important to engage coastal agricultural and interior communities and organizations, and private sector groups in the planning, decision-making and monitoring of biodiversity and cultural conservation actions. The following Strategic Directions can help achieve this improved awareness and understanding among the citizenry of Suriname:

### **Strategic Directions pertaining to Goal # 6** **Awareness, Community Empowerment and Education**

- Increase the awareness of risks, threats and opportunities for biodiversity and cultural conservation at the local level in towns, rural areas and villages of the interior through broad-based multi-lingual public awareness campaigns adapted to local language and customs.
- Establish, equip and empower an independent authority responsible for the development, implementation and evaluation of education, awareness and communication programmes pertaining to biodiversity and cultural conservation.
- Establish, equip and empower locally driven community multi-media centers capable of collaborating with and supporting the objectives of the independent biodiversity and cultural awareness and communication authority.
- Include conservation and sustainable use of biological and cultural resources issues in the educational curricula at all levels of the education system.
- Promote and support environmental education initiatives to increase community awareness of the roles and value of biodiversity and traditional culture, using a variety of means including



media announcements and public displays, botanical gardens, national parks, community centers, museums and other methods.

- Develop specific biodiversity and cultural education and awareness messages for personnel in the major economic sectors.
- Document, publish and promote knowledge (including traditional knowledge and practices) which promotes sustainable use of biological and cultural resources, taking into account the need for compensation of the owners of traditional knowledge.
- Adapt and develop school curricula in local languages, integrating traditional cultures and local expertise in the instruction and evaluation of education programmes.
- Create incentives to motivate technically trained individuals to work with education, public awareness and planning programmes in the interior.
- Create viable models of sustainable livelihoods that are accessible to all citizens for evaluation and adaptation.

### **2.2.7 Goal 7: Promote Local and Regional Co-operation and Collaboration in Implementing the CBD and the NBSAP**

*Local participation by communities, scientific community and businesses in biodiversity planning, management and monitoring will be enhanced as well as participation with other countries, by strategic alliances with members of, among others, the Amazon Cooperation Treaty, SIDS and CARICOM*

#### CBD Articles pertaining to Goal # 7

10(c) Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements;

10(d) Support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced; and

14.1(e) Promote national arrangements for emergency responses to activities or events, whether caused naturally or otherwise, which present a grave and imminent danger to biological diversity and encourage international cooperation to supplement such national efforts and, where appropriate and agreed by the States or regional economic integration organizations concerned, to establish joint contingency plans

18.2. Each Contracting Party shall promote technical and scientific cooperation with other Contracting Parties, in particular developing countries, in implementing this Convention, inter alia, through the development and implementation of national policies. In promoting such cooperation, special attention should be given to the development and strengthening of national capabilities, by means of human resources development and institution building.

Regional collaboration can be a cost-effective way to implement training programmes; implement some aspects of biodiversity monitoring, research and inventory; protect endangered species; establish sustainable harvest quotas; and control or prevent the spread of alien species.

The CBD recognizes the need for co-operation and collaboration among countries. The Convention states that countries should collaborate in areas of mutual interest (Article 5) and also states the need to co-operate in sharing resources, including financial resources and expertise, for example, co-operation in developing public education and awareness programmes (Article 13); arrangements for emergency responses to events that pose threats to biodiversity beyond national boundaries; access to genetic resources; and the transfer of technology.

Given the importance of regional collaboration to implement the CBD, the following are proposed:

### **Strategic Directions pertaining to Goal #7**

#### **Regional and International Collaboration**

- Work with other countries of the region to prepare a regional plan that outlines regional priorities, activities and programmes and needs for research, inventory, and monitoring.
- Increase activities to conserve transboundary endangered and threatened species, including preparation of regional species recovery plans.
- Develop regional responses to emergencies, such as oil spills.
- Identify problems associated with transboundary pollutants and hazardous maritime traffic and develop regional responses.
- Continue to develop a national biosafety policy and procedures and establish linkages with regional and international biotechnology committees to initiate a regional approach to the safe transfer, handling and use of living modified organisms resulting from modern biotechnology.
- Promote regional collaboration in the training of personnel, and the movement of personnel throughout the region to strengthen the regional planning capacity in all aspects related to the CBD.

#### **Local Collaboration**

- Through a series of consultation, establish and implement a legal basis for participation of local population engage in the planning, management and monitoring of localized biodiversity conservation actions.
- Create and implement programmes designed to build the capacity and institutional strength of NGOs, CBOs, private businesses and individual citizens in the planning, management, monitoring and evaluation of biodiversity conservation projects.
- Resolve land tenure conflicts that constrain or prevent the adoption and enforcement of an up to date planning law and the up to date nature conservation law, policy or mandates.
- Evaluate and update the existing national legislation related to land use and management to address social, cultural and economic factors directly or indirectly affecting biodiversity conservation.

- Develop and strengthen the technical and financial capacity of all district and resort councils and include an environment and development component within the secretariat in the district and resort councils.
- Strengthen government institutions, NGOs and private businesses engaged in the preparation of environmental impact assessments (EIAs) and develop SIA (social impact assessment) capacity

### 3.0 Next Steps: Formulation of Action Plan

The formulated Strategic Directives form the foundation that will be used to complete the Action Planning phase of the National Biodiversity Strategy. Each directive aims to guide the preparation of the Action Plan which will identify specific tasks to be undertaken to produce measurable conservation results. The Action Plan will be formulated within a specific period of time (9-12 months), and will reflect a consensus perspective by a broad stakeholder group. The responsible organizations per identified Action will be indicated as well as a detailed line item budget.

The action planning process will be facilitated by NIMOS under the guidance of the Biodiversity Steering Committee (BSC) and the Ministry of Labour, Technological Development and Environment and will include regional workshops with representatives from government and relevant NGOs, CBOs, international organizations, coastal and interior communities, and businesses with a direct or indirect interest in biodiversity conservation in Suriname. Workshop participants will initially have an opportunity to review, modify and validate the biodiversity vision, goals and strategic directions established in the NBS. The workshop participants will then have an opportunity to identify the specific activities that will need to be carried out to achieve each strategic direction. The determination of activities will include the following information about each activity identified:

- The agency, organization or group responsible for implementation;
- A list of all institutions, groups or individuals to be involved in implementation of the activity;
- Inputs or infrastructure required
- Proposed schedule for implementation
- Measurable milestones to monitor results
- Estimated costs for implementation
- Proposed funding sources
- Assumptions or risks associated with the proposed activity

Each goal will then produce an associated action plan that applies a format similar to the following:

<b>Goal:</b>							
<b>Strategy:</b>							
Action	Required Inputs	Outcomes and Milestones	Begin/End Dates	Implementation Responsibility	Estimated Costs	Funding Source	Remarks

The National Biodiversity Strategy and Action Plan (NBSAP) will serve to guide the government, institutions and international agencies and donors, NGOs, CBOs, private sector (businesses), and other groups and individuals acting to develop the economy and manage the natural resource base of Suriname in a manner that sustains the biological and cultural resources.

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Werkgroep Estuariene Kuststrook, 1976. Instelling "Bijzonder beheersgebied estuariene kuststrook". Nota over de bestemming van de zoute en brakke kuststrook in Suriname op ecologische grondslag. Rapport LBB/NB, Paramaribo. 26 pp + 4 pp appendices.

Werkhoven, M.C.M. and F.L.J. Baal, 1995. Biodiversity conservation and management in Suriname. 10 pp. In: Proceedings INBio-UNEP international workshop for the English-speaking Caribbean region: Building institutions for biodiversity management: the INBio pilot project in Costa Rica. Annex document: Report of the status of biodiversity in the participating countries.

## INTERNET WEBSITES

<http://international.fws.gov/>

(for Western Hemisphere Convention)

<http://unfccc.int/>

(for UN Framework Convention on Climate Change)

<http://www.biodiv.org/>

(for Convention on Biological Diversity)

<http://www.cep.unep.org/>

(for Cartagena Convention and related Protocols)

<http://www.cms.int/>

(for Convention on Migratory Species)

<http://www.iucn.org>

<http://www.mma.gov.br>

(for Ministry of Environment of Brazil)

<http://www.ramsar.org/>

(for Wetlands Convention)

<http://whc.unesco.org/>

(for World Heritage Convention)

## PLOS

*Ministerie van Planning en Ontwikkelingssamenwerking*

Ministry of Planning and Development Cooperation

<http://www.plos.sr/>

## ABS

*Algemeen Bureau voor de Statistiek*

General Bureau of Statistics

<http://www.statistics-suriname.org/>

## SPS

*Stichting Planbureau Suriname*

National Planning Office of Suriname

<http://www.cq-link.com/planbureau/>

## NIMOS

*Nationaal Instituut voor Milieu en Ontwikkeling in Suriname*

National Institute for Environment and Development in Suriname

<http://www.nimos.org/>



**STINASU**

*Stichting Natuurbehoud Suriname*

Foundation for Nature Conservation in Suriname

<http://www.stinasu.sr/>

Anton de Kom (AdeK) University of Suriname

<http://www.uvs.edu/>

Nationale Zoölogische Collectie van Suriname (NZCS)

National Zoological Collection of Suriname

<http://nzcs.uvs.edu/>

Suriname Conservation Foundation

<http://www.ci-suriname.org/scf/>

Organisatie van Inheemsen in Suriname

<http://www.coica.org/en/members/ois.html>

World Wildlife Fund Guianas

<http://www.wwfguianas.org/>

Conservation International Suriname

<http://www1.sr.net/~t100465/>