



EXECUTIVE SUMMARY

The Federation of St. Kitts and Nevis consists of the islands Saint Christopher (St. Kitts), Nevis and Booby Island-uninhabited. The Country is located in the Northern part of the Leeward islands in the Eastern Caribbean, 19 degrees North of the equator, with a population of approximately 46,000 persons living on 269 sq km. Separated by a two mile stretch of water, St. Kitts is 176 sq. km. (68 sq. mi.) and Nevis is 93 sq. km. (36 sq. mi.); Booby island is (2 sq. mi.). The former is a stunning combination of volcanic mountains, rain forests and beautiful beaches. Nevis equally, is known for its natural beauty, genteel plantations and pristine beaches. Bobby island is an island off which marine life is *abundant*, a haven for divers.

The terrestrial fauna of the islands is mainly comprised of introduced animals; however, the natural flora is very diverse and has high endemism. The coastal and marine diversity of St. Kitts and Nevis includes a rich variety of reef and pelagic fish species, lobsters, conch, sea grasses, sea turtles, mangroves, algae, resident and migratory birds.

The country's biotic wealth has played an important role in its economic development and has made significant contributions to traditional communities. However the following present a challenge to biodiversity conservation:-

- Poverty
- Tourism ventures
- Lack of public awareness and education
- Traditional medicine
- Pollution
- Cultural attitudes
- Unsustainable developmental practices
- Overgrazing
- Monoculture sugarcane cultivation
- Infrequent research
- Agro-processing
- Severe hurricanes
- Recreational activities
- Introduction of alien species



St. Kitts and Nevis National Biodiversity Strategy and Action Plan



Despite these environmental, cultural, social, and economic constraints, the view is that with proper implementation of well-developed environmental managerial strategies, policies, and plans, as well as proper utilisation of traditional knowledge, public education, legislation and enforcement, these long-term negative impacts on the environment can be mitigated. To this end St. Kitts and Nevis became signatories to the CBD convention in 1992. The convention recognizes that both biodiversity and biological resources should be conserved for reasons of ethics, economic benefit and human survival.

With regards to the provisions in the CBD on conservation and sustainable use, the focus on action at the national level is emphasized by two crucial articles – article 1 which sets out the Convention’s objectives and the sustainable use of its components, and article 6 which requires each Party to develop national strategies, plans or programmes for conservation of biodiversity and sustainable use of biological resources. Therefore this National Biodiversity Strategy and Action Plan is formulated to meet the requirement of the convention through Article (6). The strategy and action plan extensive consultations with non-governmental organizations, community based organization, government agencies and traditional user groups and a series of country reports informed this Strategy and Action Plan.

The St. Kitts and Nevis National Biodiversity Strategy and Action Plan (NBSAP) seeks to present a focused and dynamic report on strategies for conservation of the biological resources of the country through: the specification of goals and objectives; defining the current known range and status of biodiversity; describing the probable sources of biodiversity losses; analysis of gaps between current reality and aspirations; identification of actions that can address these gaps, goals and objectives specified; timeframes for the execution of the actions; the proposal of budget outlines for these projects; and a format for the successful implementation, monitoring and evaluation of the NBSAP. This plan is extremely important to the Federation because



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its social and economic survival now and into the future depends heavily on the quality of its natural resources.

The NBSAP document outlines twenty (22) projects representing a combined investment of approximately US\$ 4,043,694.00 and ranging from a timeframe of eleven (11) months to five (5) years. Government agencies, NGO's and research groups, all of which are already involved in biodiversity conservation and management activities, will undertake the projects.



CHAPTER 1 INTRODUCTION

1.1 IMPORTANCE OF BIODIVERSITY

Biodiversity comes from the phrase 'biological diversity' and simply means 'the variety of life' and its processes. It includes the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. Every organism and the ecosystems of which they are a part work and interact together to maintain the Earth's irreplaceable 'life support system'. The subject of biodiversity is therefore an interdisciplinary one. A concern for the conservation of one constituent of biodiversity is a concern for the preservation of all that exist within it.

The benefits of conserving biological diversity are numerous. To begin with, it is the primary source for the fulfilment of humanity's needs. The world's species provide us with all our food, fuel, building materials, medicines and industrial products eg. fish, meat, vegetables, oil, wood, boulders, herbal plants and bauxite, to name a few. Benefits of biodiversity are not restricted to the provision of products, they extend to the provision and maintenance of a wide array of ecological services. These include the maintenance of hydrological cycles (groundwater recharge, watershed protection and buffering against extreme events), air purification, climate regulation, soil production and fertility, protection from erosion, nutrient storage and cycling, pollutant breakdown and absorption, biological control of pests; to name some of the services. In addition, biodiversity has important recreational values eg. beaches, and provides us with what ecologist E. O Wilson terms, Biophilia; a term for describing the healing effects nature has on people, based on the theory that humans are genetically coded with a need for contact with nature. Such interaction has been shown to reduce anxiety and depression.

Over the centuries, decisions have been made with the goal of achieving higher standards of living, not taking into account the natural regeneration rates of biodiversity. This has resulted in the degradation, over-use and loss of natural systems in the Federation of St. Kitts and Nevis. Decision makers have realized that such actions can no longer persist, therefore the situation of biodiversity degradation and loss are critical issues for St. Kitts and Nevis.



1.2 CONVENTION ON BIOLOGICAL DIVERSITY

From as early as 1973, the United Nations Environment Program (UNEP) recognized that the conservation of natural and genetic resources is a priority area for environmental focus. During the ensuing years, increased awareness of the world's diminishing biotic wealth inspired the international community to prepare a number of environmental and developmental policy documents promoting a global convention on biological diversity.

On May 22nd 1992 at the Nairobi Conference, extensive negotiations dramatically extended previous proposals, resulting in the adoption of the Convention on Biological Diversity (CBD). Later that year, at the Earth Summit in Rio de Janeiro, the Federation of St. Kitts and Nevis, along with 155 other nations and the European Union, signed the legally binding instrument – the “Convention on Biological Diversity”.

Upon endorsement of the Convention on June 12th 1992 and ratification on January 7th 1993, St. Kitts and Nevis became obligated under Article 6 of the CBD to develop national strategies, or adapt existing plans, to ensure sustainable use and conservation of biological resources, as well as the fair distribution of benefits related to biodiversity and genetic resources.

Since ratifying the convention on Biological Diversity, the compilation of a National Biodiversity Strategy and Action Plan (NBSAP) constitutes the first of a set of actions by St. Kitts and Nevis to fulfill its obligations under the Convention. The Plan describes the Government's aims for biodiversity conservation, with clear targets and approaches. Further, the NBSAP offers a mechanism by which Government can show not only how they will meet their obligations under the CBD, but how their progress can be assessed.



This National Biodiversity Strategy and Action Plan is developed on the basis of the information presented in four country studies on:-

- Socio-economic issues;
- Tourism and Biodiversity;
- Marine and Coastal Biodiversity;
- Agriculture & Forestry Biodiversity;

These crucial reports give an overview of the current status of biodiversity within the Federation; the extent of current protection and related contextual factors (such as economic, legal, educational and scientific frameworks), along with other issues that allow for the comprehensive examination of the status of local biodiversity. The information garnered from the above studies provided material that informed the development of the country's first National Biodiversity Strategy and Action Plan.

1.3 PURPOSE AND SCOPE

The St. Kitts and Nevis National Biodiversity Strategy and Action Plan is designed to present a focused and dynamic report on strategies for the conservation of the biological resources of St. Kitts and Nevis. Furthermore, it provides information, policy, and implementation guidance for decision makers, activists, and research institutions involved in biodiversity planning and conservation.



1.4 BRIEF DESCRIPTION OF THE METHODOLOGY USED IN PREPARATION OF THE NBSAP

The Department of Environment appointed a Project Coordinator who spearheaded the forming of a National Steering Committee. The committee was comprised of representatives of pertinent government agencies, Non-Governmental Organizations, Community-Based Organizations, education, and research institutions. Its main function was to guide and contribute to the development of the Country Studies and the NBSAP. Four National Consultants were contracted to develop the Country Studies in the four focal areas mentioned earlier in this document. For the preparation of the NBSAP, two National Consultants were then recruited to conduct independent research and assimilate all the information gained in the above processes. *Appendix 1* exhibits elements of the process involved in the formulation of this NBSAP.





CHAPTER 2 OVERVIEW OF ST.KITTS AND NEVIS

2.1 Geographical profile

2.1.1 LOCATION AND SIZE

The twin island state of St. Kitts and Nevis has a total landmass of 269 sq km (104 sq mi). St. Kitts is 176 sq km (68 sq mi) and located at latitude $17^{\circ} 15' N$, and longitude $62^{\circ} 45' W$. Nevis, which is 3 km (2 mi) southeast of St. Kitts, is 93 sq km (36sq mi) and located at latitude $17^{\circ} 10' N$ and longitude $62^{\circ} 35' W$, see Map 2.



Map 2: Map of the Caribbean showing the location of St. Kitts and Nevis



2.2 TOPOGRAPHY

ST. KITTS

The island of St. Kitts generally rises from the coastline towards its mountainous interior. Three volcanic centers, their associated glacial deposits, and a chain of more maturely reduced residual hills linked by recent beach and saline deposits characterize the topography of the central northwest range.



Figure 1: Mount Liamuiga
Source: Patrick Williams

The highest point is Mount Liamuiga, *Figure 1*, which rises to 1,156 m (3,792 ft.). Southeast of Mount Liamuiga, the dormant volcanic chain continues and is the middle range. The summit of Verchild's Mountain is the highest point of the middle range, more than 976 m (3,202 ft.) above sea level.

The terrain on St. Kitts slopes steeply from the central peaks, flattening out to gentle slopes and low cliffs towards the coastal fringe, *see Figure 2*. Thus, most flat or moderately sloped land occurs near the coastal area, and thus most urban and agricultural developments have occurred in these regions. Minor domes protrude from these lower slopes at Brimstone Hill, Ottley's Mountain, Sandy Point Hill, and Monkey Hill. Furthermore, the slopes are characterized by deeply incised ghauts with steep sides and act as the primary channels for drainage.



Figure 2: Central Mountain Ranges sloping to lush green sugar cane

The island's coastline consists primarily of cliffs, some 15.2 to 30.5 metres (50 -100 ft) high. Beaches at the foot of these cliffs are narrow and the sand is coarse and black, with many pebbles and boulders. Exceptions are in the northwest where the cliffs are lower and the beaches are wider.

The Southeast Peninsula, *see Figure 3*, is the southern part of St. Kitts that spans the slim end of the island's formation. It is largely characterized by tied islands, about one third of a mile wide and with peaks of up to 180 - 213 m (59 – 699 ft.). The southern extremity has hills with elevation up to 335m (1,099 ft.). The peaks of all these mountains are less than 7km from the sea, an indication of the island's high relief, which in turn has had and will continue to have an important orographic influence on the climate, land use and the general physical development of the island.

