

# **INTEGRATING BIODIVERSITY INTO THE TOURISM SECTOR**

**A CASE STUDY ON THE REPUBLIC OF SEYCHELLES  
FOR THE UNDP/UNEP BIODIVERSITY PLANNING  
SUPPORT PROGRAMME**

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## **INTRODUCTION:**

The Republic of Seychelles is a tiny and geographically isolated island State situated in the Western Indian Ocean between 4 and 11 degrees South of the equator. The Archipelago comprises 115 islands with a total land area of some 445km<sup>2</sup> scattered across an Exclusive Economic Zone of approximately 1.3 million square kilometres.

Seychelles was first colonised in 1770 and became an independent country in 1976.

The opening of an International Airport in 1972 and the collapse of the copra market have seen tourism rapidly develop in Seychelles to become the primary pillar of the country's economy. The tropical climate, idyllic beaches, scenery and the unique flora and fauna form the basis of the attraction of the islands to tourists. As such the integration of biodiversity concerns into the tourism sector and vice-versa is very important to enable the sustainability of both the tourism industry and the use of the country's biological diversity.

## 1.0 OVERVIEW OF PRESENT STATE OF TOURISM DEVELOPMENT IN THE COUNTRY.

### 1.1 Relative Importance in the National Economy.

Tourism is the mainstay of the Seychelles' economy, in 1999 it accounted directly for 12.7 per cent of the country's Gross Domestic Product (GDP) (see table 1) and it employed some 25 per cent of the active labour force.

<b>Contribution to GDP from the Tourism sector in 1999</b>	
<b>( US\$ 1 : 5.8 SR/- as of 27/12/00)</b>	<b>Rupee (millions)</b>
Handicrafts	21.3
Air transport	5.3
Tour operators	29.4
Hotels, restaurants	257.8
Road transportation (passengers)	31.9
Communications & storage	40.8
Recreation	15.0
<b>Total</b>	<b>401.5</b>
<b>% contribution to GDP</b>	<b>12.7%</b>

These direct benefits, furthermore, are clearly an underestimate of tourism's contribution to the economy as they do not incorporate the portion of production from agriculture and fishing which goes directly to tourism catering establishments, or the construction industry which builds tourism infrastructure.

As such there is a second and, in the case of Seychelles, perhaps more significant way to consider tourism's benefit to Seychelles' economy and that is in terms of the country's balance of payments account.

Seychelles, due to its small size and hence limited resources, depends to a significant extent upon imports from the international market. The tourism services sold act as exports in as much as they bring hard currency into the National economy. In 1999 total tourism income in foreign proceeds accounted for 61 per cent of total foreign earnings.

Table 2 below shows how tourism earnings have changed since 1990\*.

**Table 2: Tourism earnings in Rm**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Tourism earnings</b>	658.0	540.0	618.0	663.0	612.0	612.0	696.0	783.0	703.0	750.0

\* Adapted from: Tourism in the Seychelles Economy, Central Bank of Seychelles, Dec. 1999.

In recent years the Government of Seychelles has made a concerted effort to broaden the base of the economy and has been particularly successful in terms of fisheries exports and in the creation of an International Trade Zone.

One of the key motivations behind these developments is to provide better stability to the economy. Tourism is prone to fluctuations and outside influences as is noticeable in table 2 for 1991 (Gulf war) and 1998 (Asian Economic Crisis).

As such Government aims, with time, to make tourism one of several pillars of the economy and thereby reduce its singular importance. This however is a medium to long term goal and when one considers all the economic activity which stems directly and indirectly from tourism, plus the extensive scope for expansion this sector offers, it is likely to remain Seychelles' primary industry for the foreseeable future.

<b>Table: Visitor Statistics</b>										
	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>
<b>Arrivals (No.)</b>	103770	90050	98547	116180	109901	120716	130955	130070	128258	124865
<b>From Europe (%)</b>	78.3	71.7	80.5	80.8	81.5	76.9	75.6	78.6	79.8	80.9
<b>From Africa (%)</b>	15.3	20.9	12.3	11.7	10	11.8	10.2	10.8	9.9	11.4
<b>From Other (%)</b>	6.4	7.4	7.2	7.5	8.5	11.3	14.2	10.6	10.3	7.7

## **1.2 Relative Priority in National Planning Policy:**

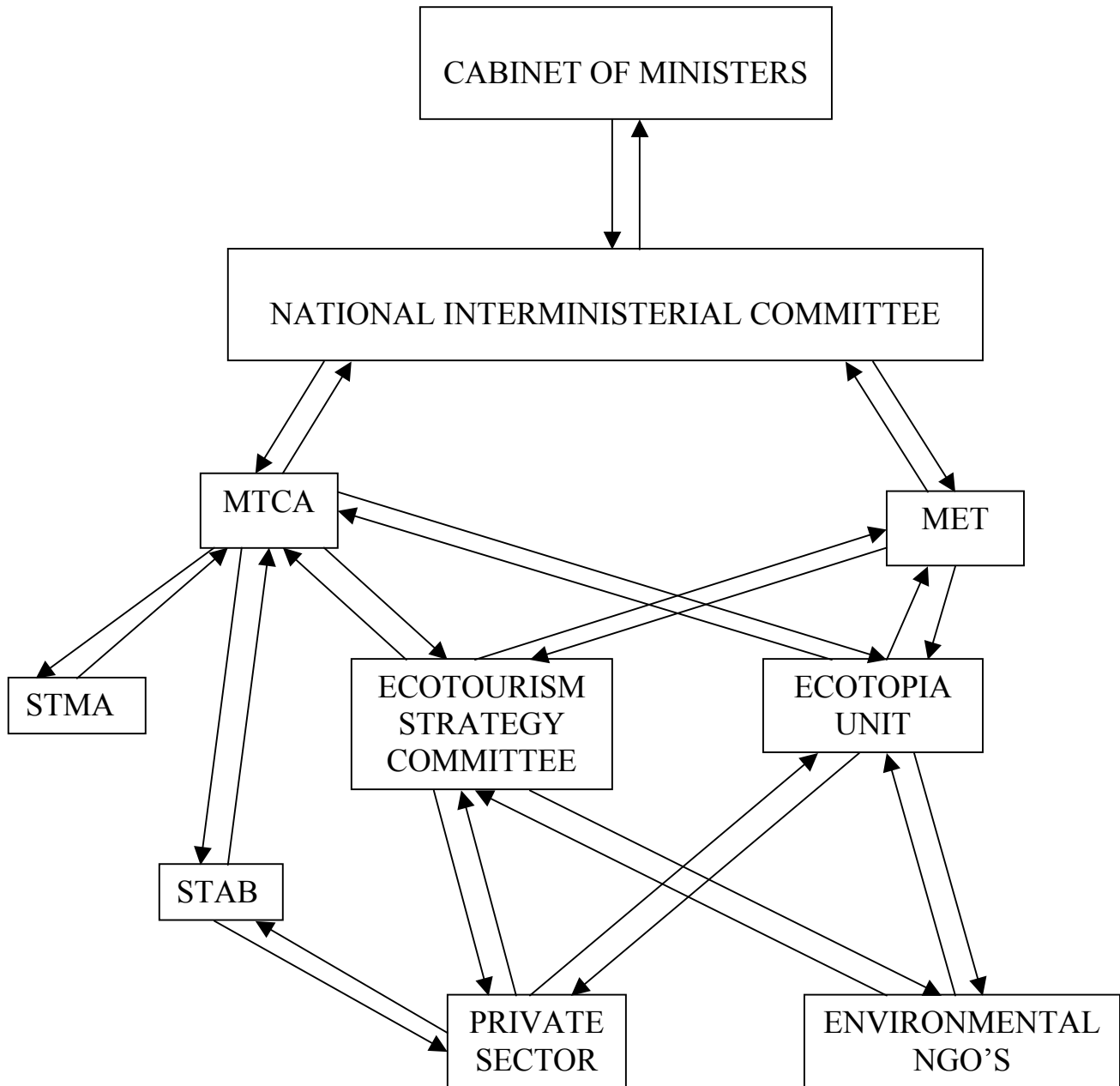
The key role that tourism plays in the Seychelles economy is clearly recognised and understood by Government and this is reflected in National Planning Policy.

A stagnation in visitor numbers during the late 1990's resulted in a rapid response from Government as it appraised and re-organised its institutional structure in line with findings identified in the process of its ongoing development of the Seychelles Tourism Master Plan. Prominent amongst these changes are the formation of the Seychelles Tourism Advisory Board (STAB) and the Seychelles Tourism Marketing Authority (STMA) and the revision of taxes levied, to provide additional incentives to the industry, such as the abolition of the bed license, reduction in social security payment and work permit fees for hotel operations and the right for certain establishments to import food and beverage items. The year 2000 has seen an up turn of 3% in visitor numbers.

In addition Government spending on tourism is substantial. The Ministry for Tourism, one of 16 Government ministries, received some 7% (42,034,000 SR) of Ministerial Government expenditure in the year 2000 budget allocation behind only the Education, Health, Defence and Environment portfolios.

Furthermore, these figures do not include the budget for STMA (approx SR18,000,000) and the enormous ongoing investment upon infrastructure – roads, transport, sewerage, water supply, electricity generation, airport renovation, cruiseship port construction, harbours on the second and third islands and the East Coast Reclamation Project Phase III (US\$50,000,000) - all of which have major components committed to providing facilities and infrastructure to enable a high quality tourist industry.

1.3 Institutional Structure of Tourism Government Planning and Policy



- See overleaf for elaboration of roles of the various agencies.

NIC	-	National Interministerial Committee; a high level technical committee, chaired by the President of the Republic and comprising senior civil servants and managing directors of Government parastatal agencies, which provides technical input to memoranda prior to their submission to the Cabinet of Ministers.
MTCA	-	Ministry of Tourism and Civil Aviation
MET	-	Ministry of Environment and Transport
STMA	-	<p>Seychelles Tourism Marketing Authority</p> <p>An agency which develops and markets the National image of Seychelles as a tourist destination with the explicit functions, as specified in the official gazette:</p> <p>(a) to encourage people to visit Seychelles</p> <p>(b) to promote or undertake general tourism publicity and to monitor, supervise and coordinate such publicity undertaken by others.</p> <p>(c) to conduct market research</p> <p>(d) to advise the Government on matters relating to the marketing of tourism</p>
STAB	-	<p>Seychelles Tourism Advisory Board co-chaired by the Vice-President and the Minister for Tourism and Civil Aviation. STAB – comprising thirteen members from both the private sector and Government – acts as the advisory body to Government in order to help address, and devise appropriate solutions for, the deficiencies affecting tourism numbers.</p>
Ecotourism Strategy Committee	-	A newly established committee co-chaired by representatives of the ministries for Tourism and Environment with broad stakeholder membership established to develop a strategy for ecotourism development in Seychelles.
ECOTOPIA UNIT	-	is a unit within the MET to identify, enable and promote (in close collaboration with STMA) ecotourism locations, tour packages and special interest vacations in Seychelles.

#### **1.4 Dominant Types of Tourism Practiced.**

The vast majority of visitors to Seychelles are from Europe (80.9% of visitors from Europe in 1999. Source GoS MISD, 2000) and hence European visitors have formed the main focus of questionnaires and research as to their preferences etc... Results of a survey undertaken in November 1999 (STMA, 2000) indicate that the vast majority of visitors came to Seychelles for conventional reasons. Expectations are of:

- sunshine, deserted beaches, relaxed lifestyle
- an idyllic and exclusive “getaway” paradise destination
- an abundance of exotic fresh fruits and seafood (adapted from STMA, 2000)

Nature-based tourism, in the broader sense, however also plays a major role as other expectations were:

- built around nature, escapism and tranquillity
- an unspoiled idyllic destination, “a beautifully preserved nature” (adapted from STMA, 2000).

The importance of nature-based tourism is underlined when visitor numbers (in 1999 a year when Seychelles had 124,865 visitors in total) to ecotourism sites are considered eg:

Vallee-de-Mai:	53,419
Marine Parks:	29,652
Cousin Island:	10,626

Cultural tourism is not considered as a singular attraction, although of course it is an important component of the overall package. As such the actual allure of cultural tourism is hard to assess. However, Seychelles does host the Creole festival every year, which celebrates the global Creole culture. This takes place every October and there is a consistent peak of visitor numbers in October which may reflect such tourism interest.

### **1.5 Participation and Degree of Interaction of Different Sectors and Stakeholders in the Tourism Process.**

Seychelles is a country with an economy in transition. In 1993 the ruling political party embraced free, multi-party democratic elections, and has retained power through two general elections to date.

From that time on the Government has sought to create an enabling environment for private businesses and free enterprise in a capitalist economic system with a social face – ie. redistribution of wealth, free education, free health care for all and a supporting welfare system.

This has meant a privatisation scheme of nationalised businesses including hotels and a major tour operator, a growing private sector, a burgeoning and dynamic NGO sector and ever more interactive, participatory and transparent decision-making in the tourism process. This is apparent with reference to the diagram of institutional structure in section 1.3, which clearly outlines the various points at which the private sector and public in general have input into the decision making process most notably through STAB and the Ecotourism Strategy Committee.

Furthermore to ensure local investment in and ownership of touristic concerns and operations the Government has placed certain conditions and incentives upon investment in the tourism sector notably:

- Small hotels (licensed as Guest Houses), which have less than 25 rooms, are reserved exclusively for Seychellois investors.
- Any tour operator must have two thirds of its shares held by Seychellois.
- Any investment in maritime tourism activities below SR1 million is reserved for Seychellois.
- The car hire sector is reserved strictly for Seychellois.

Obviously the process of economic transition is complex and requires careful planning and methodical implementation to avoid negative economic impacts, but the measures taken to date have greatly enhanced the participation and degree of interaction in the tourism process.

## **1.6 Education and Training of Tourism.**

The Seychelles Hospitality and Tourism Training College (SHTTC) was established to meet the identified need for education and training for the Tourism Sector. Opened in 1993 the SHTTC was formally transferred to the Ministry of Tourism in 1995, where it is now a unit of the Human Resources Development Section. This move has integrated the college directly into the Tourism Development structure and has enabled it to become more innovative, pro-active and perhaps most importantly more responsive to industry needs and requirements. The college moved to a new location in 1998 to enable expansion of intake to some 220 students per annum.

In addition the Centre for Skills Development at the Ministry of Employment and Social Affairs offers a training scheme for unskilled, unemployed youth and school leavers. Under this initiative trainees are given on-the-job training over a period of three months to two years through funded attachment to various tourism enterprises.

Finally there is a national tourism service and awareness promotion scheme “U-First” which through annual prize-giving ceremonies, and in tandem with its affiliated monthly National television programme “Check-in”, highlights the importance of good service to tourists by the community and service industries in general, as well as the latest innovations and changing trends in the tourism industry.

## **1.7 Compliance with Existing International Guidelines on Best Practice for Sustainable Tourism.**

In terms of policy the Government of Seychelles has gone to considerable lengths to comply with International Guidelines on sustainable development in SIDS; inherent in which is tourism development.

eg: The Programme of Action for the Sustainable Development of Small Island States.  
(Commission on Sustainable Development).  
The Barbados Declaration 1994.  
Global Code of Ethics for Tourism WTO 1999.

Undertakings to comply, as discussed elsewhere in this document, include:

- i) Development of Strategies and Plans: ie. EMPS 2000-2010 and Tourism Master Plan (TMP) 2000-2010 which include activities designed to bring about sustainable tourism development in all its aspects: economic, social, environmental etc...
- ii) Social/Cultural: Government policy in tourism development is geared to attract high-paying up-market clientele in order to avoid mass tourism and its inherent social and cultural impacts.
- iii) Economic:
  - policies and legislation put in place to encourage local investment.
  - incentives to local businesses to meet tourism requirements and therefore localise tourism benefits and revenue.
  - development and diversification of eco- and special interest tourism to provide funds for environmental management.
  - active drive to diversify and broaden base of economy to lessen dependency on tourism.



iv) Environment:

- EIA of tourism development covering all aspects from sociocultural to biodiversity and waste management.
- development of draft tourism land use plan, (in TMP 2000-2010) proposing locations for tourism development and specifying pre-determined carrying capacities.

### **1.8 Main Ecotourism Attractions of Seychelles.**

Seychelles with its extraordinary abundance of endemic species, potential for special interest pursuits and breathtaking scenic beauty could be considered an ecotourism attraction in its entirety and certainly there is considerable scope for expansion of these niche markets. However, at present there are several, what could be termed, “mass” ecotourism attractions functioning in the country:

- The Vallee de Mai, a primeval palm forest, home to many extraordinary species, most famously the endemic Coco-de-mer palm. This UNESCO World Heritage Site plays host to some 50,000 paying visitors a year.
- The Marine Parks Authority (MPA) operates a system of six Marine National Parks, of which St. Anne Marine Park with over 30,000 visitors per annum is reputed to be the most frequented in East Africa.
- The NGO-owned and managed Special Reserves of Cousin and Aride islands are world-renowned for their bird populations, both terrestrial and marine, and function off their visitor revenues. (see 4.6c)
- The Morne Seychellois National Park offers a variety of walks and trails through montane rainforest, and the option to visit with licensed private tour guides should visitors so wish.
- Mont Fleuri Botanical Gardens – these tropical gardens on the outskirts of the capital Victoria form part of most tour operators’ sight-seeing trips and it is estimated that in excess of 25,000 tourists visit them annually.
- More exclusive are the private island resorts several of which market themselves as ecotourism “get-away” destinations due to the presence of certain key endemic species or impressive bird colonies – eg. Cousine, Bird and Fregate islands.

## **2.0 OVERVIEW OF PRESENT STATE OF BIODIVERSITY CONSERVATION AND PLANNING.**

### **2.1 Relative Priority in National Planning Policy.**

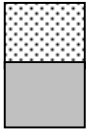
In the allocation of authorised expenditure (Budget 2000), the Ministerial portfolio for Environment and Land Transport received SR49,000,000, representing 7.9% of the total ministerial allocation and placed it fourth, of sixteen ministerial portfolios, behind Education 22.3%, Health 21.8% and Defence 9.5%. In addition to this Government commits substantial counterpart funding to complement any overseas funding of biodiversity projects.

However, probably more indicative of the priority given to Biodiversity is that some 47% of the country’s entire landmass is protected by law for the purposes of environmental management.

Furthermore, all structural developments are subject to Environmental Impact Assessment (EIA) regulations under the Environmental Protection Act (EPA) 1994 which is distinct from and in addition to the requirements of the Planning Authority and the country’s Town and Country Planning Act. (1971)



## KEY



- Full stakeholder participation/consultation.
- Private and NGO Sector involvement.

- See overleaf for elaboration of roles of agencies.

MAMR - Ministry of Agriculture and Marine Resources.

SFA - Seychelles Fishing Authority, a parastatal affiliated to MAMR, established in 1984 with the following functions/roles:

- a) to promote, organize and develop fishing, fishing industries and fishing resources in Seychelles;
- b) to assist in the formulation of the national policy with respect to fishing, fishing industries and fishing resources and in the implementation of that policy;
- c) to conduct negotiations, or engage in meetings, seminars or discussions, with regard to fishing or fisheries or the establishment or operation of fishing industries, whether at a national or international level, on behalf of the Republic or otherwise;
- d) to identify the manpower training requirements of Seychelles with regard to fishing and fishing industries.

NEAC - National Environment Advisory Council. Established in 1994.

The Council shall consist of such members as are appointed by the Minister from among persons representing the Government Departments, Non-Governmental Organisations and Associations having environment related functions or who in the opinion of the Minister are knowledgeable in matters relating to environment.

The functions of the Council shall be to:-

- a) consider any matter affecting the quality of the environment and report to the Minister;
- b) advise the Minister on the state of the environment and make recommendations regarding actions and measures for environment protection and for improvement of the quality of the environment;
- c) consider any other matter that may be referred to it by the Minister.

SNCRN - Seychelles National Coral Reef Network (SNCRN) is a network of Governmental and non-Governmental organisations and interested parties whose goal is to monitor and report on the status of coral reefs and facilitate the sustainable use of the reefs of Seychelles.

BIRDFORUM- a stakeholder forum and action group for all agencies actively involved in bird projects or management of important avian habitats.

### **2.3 Perceived Degree of Participation of the Country in the CBD, and Perceived Benefits of Being a Party to the CBD.**

Seychelles, relative to its size and resources, has been an extremely active party to the Convention on Biological Diversity whether that be in terms of participation in negotiations for and developments of decisions on thematic areas, involvement in the ad-hoc working group on Biosafety or in implementation of pertinent CBD decisions.

In terms of National policy and resource deployment, Seychelles recognises the CBD as the global biodiversity convention and forum as well as being the logical ultimate “umbrella” convention for the many other multilateral biodiversity agreements. This approach is advantageous to Seychelles as it allows it to focus its necessarily limited personnel and resources most effectively in this global forum.

Further perceived benefits include:

- the text of the CBD and various decisions make clear references to equitable benefit sharing, recognition of socio-economic and cultural factors, the precautionary principle and the special role, responsibilities and circumstances of Small Island Developing States (SIDS) vis-à-vis the conservation and sustainable use of biodiversity.
- the opportunity to play a role in global policy development and notably the directions given to the Global Environment Facility (GEF).
- the enhanced ability to access funds from the GEF and other donors.

### **2.4 Overview of the Role of NGO's and Local Communities in Biodiversity Conservation Main Activities, Constraints and Achievements.**

For a small country with a tiny population (80,000) Seychelles has a very active and dynamic NGO community. There are five main NGO's involved - and a National Trust - in the environment field, two of which are currently implementing GEF funded medium-sized projects. These organisations are variously involved in protected area management, endangered species conservation, environmental monitoring and public education and awareness. Three of the six agencies have extensive tourism activities - see Sec. 2.5 .

- **BirdLife Seychelles:** an extremely active nationally registered association and part of the greater BirdLife International family. BirdLife is currently implementing a GEF MSP entitled “Management of Avian Ecosystems in Seychelles” which is primarily focusing on 3 critically endangered endemic bird species, their associated ecosystems and the rehabilitation thereof.  
BirdLife Seychelles also manages the world-renowned Cousin Island Special Reserve.
- **Royal Society for Nature Conservation:** manages the world famous Aride Island Special Reserve which is the most important seabird colony in the granitic Seychelles.
- **The Marine Conservation Society of Seychelles:** A relatively new association, registered in 1998, the MCSS has recently commenced implementation of a GEF MSP entitled “Marine Ecosystems Management Project”. This project is focusing on the severe coral bleaching event of early 1998 assessing the extent of the damage, the degree of recovery and generating policy proposals and action plans to best mitigate against and cope with these changes.

- **The Nature Protection Trust of Seychelles (NPTS):** A relatively small locally registered association has particularly focused upon endemic giant land tortoise and terrapin research and breeding. It also works quite extensively in taxonomic research. The NPTS publishes a quarterly magazine “Birdwatch” as well as an annual of scientific papers entitled Phelsuma.
- **Wildlife Clubs:** This locally registered association has formed clubs in the vast majority of primary and secondary schools as well as the National Polytechnic. These clubs work to raise awareness, amongst youths and society in general, of issues relating to Seychelles biodiversity and ecological balance.
- **Seychelles Island Foundation:** In addition there is the QUANGO – (Quasi Autonomous Non Governmental Organisation) Seychelles Island Foundation (SIF), in fact a National trust, whose Patron (the President of the Republic) appoints the chairman and directors. SIF is responsible for managing the country’s two UNESCO World Heritage sites Aldabra atoll and the Vallee-de-Mai.

One of the key constraints apparent in NGO’s is the lack of trained resource personnel: expatriates or naturalised Seychellois predominate on the boards of directors and in the technical posts; this despite active efforts by NGO’s to localise posts. This of course in part reflects the usual scenario in SIDS where qualified human resources are at a premium but also heightens the importance of organisations such as the WildLife Clubs and its role in involving the youth in the field of biodiversity conservation.

## **2.5 Overview of National System of National Parks and Protected Areas.**

The Government of Seychelles is committed to environmental protection through article 38 of the constitution of the Republic which states:

- |                           |  |
|---------------------------|--|
| Right to safe Environment | <p><b>38.</b> The State recognises the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment and with a view to ensuring the effective realisation of this right the State undertakes -</p> <ul style="list-style-type: none"> <li>a) to take measures to promote the protection, preservation and improvement of the environment;</li> <li>b) to ensure a sustainable socio-economic development of Seychelles by a judicious use and management of the resources of Seychelles;</li> <li>c) to promote public awareness of the need to protect, preserve and improve the environment.</li> </ul> |
|---------------------------|--|

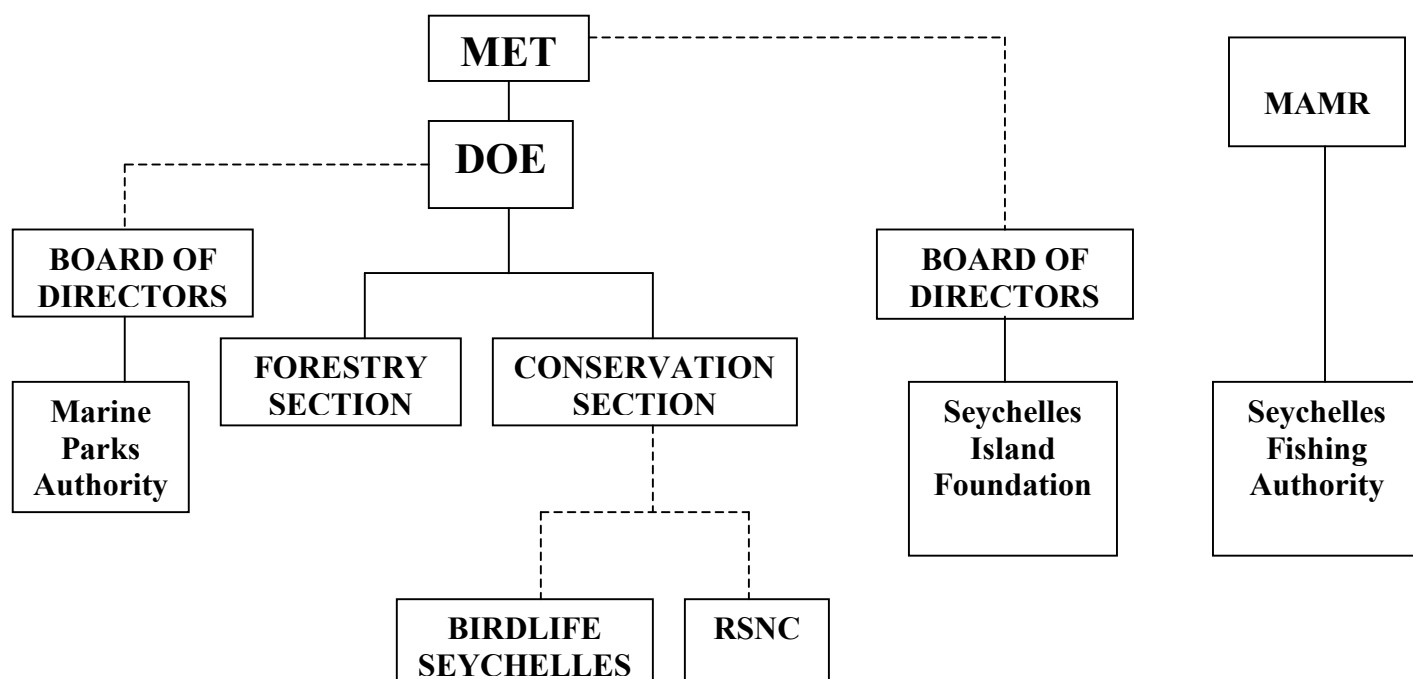
Approximately 47% of Seychelles’ landmass is protected for conservation reasons under the following two pieces of legislation:

- i) The National Parks and Nature Conservancy Act (1971) has the main classifications:
  - Strict Nature Reserve
  - Special Reserve
  - National Park
  - Area of outstanding Natural Beauty.
- ii) The Wild Animals (Birds) Protection Act (1966).
  - Nature Reserves.

In addition the Fisheries Act (1986) has declared four shell reserves, the Stateland and River Reserves Act 1965 (Reserves provision) protects the banks of all rivers and rivulets as listed in its annexes - some 111 watercourses, - whilst the Environment Protection (Impact assessment) Regulations, 1996, list more than 300 sites (sensitive areas) of high ecological and morphological value, where development will be limited.

An overview of the main protected areas - administrative structure, a brief description, operational budgets and visitation and tourism aspects - is provided in the table and the administrative structure organogram overleaf.

### NATIONAL ADMINISTRATIVE STRUCTURE FOR PROTECTED AREA MANAGEMENT



### **3.0 OVERVIEW OF LINKS BETWEEN TOURISM DEVELOPMENT AND BIODIVERSITY CONSERVATION AND PLANNING.**

#### **3.1 Description and Critique of Existing National Strategies Applied to Interactions Between Tourism Development and Biodiversity Conservation and Planning.**

There are four main Strategy Policy documents, which pertain to Tourism and Environment and are relevant to this study.

- The Environmental Management Plan for Seychelles (EMPS) 1990-2000.
- The Seychelles National Biodiversity Strategy and Action Plan (NBSAP) 1997.
- The EMPS 2000-2010.
- The draft Seychelles Tourism Master Plan.

### **EMPS 1990-2000:**

This document identified infrastructure requirements such as sewerage and implemented some; as well as implementing biodiversity programmes which supported tourism directly and indirectly respectively.

The first EMPS, however, failed to formulate a clear policy for tourism and biodiversity in general or ecotourism specifically, indeed no specific programme for tourism was identified.

### **NBSAP 1997:**

The NBSAP makes several explicit references to tourism and ecotourism, notably with reference to tourism and protected areas where it states “Coordination between tourism and conservation authorities is of immense importance”. It further states that the “Tourism Industry directly depends on its biological resources and diversity”.

Ecotourism is also referenced and it is noted that there are no established protocols, guidelines or programs for ecotourism and neither are there training courses in this field, but the document infers that the lead agency in this domain is the MTCA, and there are no direct activities proposed to address this concern.

More significantly there are no activities to limit or mitigate the negative impacts of tourism development on biodiversity conservation and this is clearly a weakness in the strategy.

The NBSAP does however, cite the development of environmental economics and its incorporation into development planning which of course would also apply to tourism developments.

As with the EMPS 1990-2000, the NBSAP has many projects whether protected area, ecosystem or species oriented that would indirectly benefit tourism and ecotourism.

### **EMPS 2000-2010:**

The second EMPS in its development noted the tourism-related shortcomings of its predecessor and has a whole thematic area entitled “Tourism and aesthetics” which identifies four key management Priority areas, namely:

- Develop and implement national eco-tourism policies, codes of conduct and products.
- Limit and control the negative impact of tourism on the environment.
- Limit natural resource consumption and encourage cleaner production in tourism establishments.
- Develop and strengthen institutional capacity to assist in improving tourism environmental management.

and specific activities are set out to meet these ends.

The second EMPS also refers to ecotourism initiatives in the thematic area on biodiversity, whilst the thematic area on fisheries and marine resources mandates an assessment of the recreational fisheries potential.

As such the EMPS 2000-2010 is clearly a quantum leap forward in terms of expression of intent to incorporate biodiversity conservation concerns into tourism development. Of course a statement of intent does not automatically lead to concrete actions and the implementation of these activities will require consistent political and financial support to yield valid results.

### **Tourism Master Plan:**

This document has been under development for a few years, the process being dogged by delays and impeded by the recent extensive restructuring of the Tourism Ministry, and is still only in draft form.

The tourism plan plots an ambitious course of tourism development and diversification through to the end of 2010 effectively doubling the tourism bed availability in that period and projecting visitor arrivals to increase by 100,000 – 130,000 per annum (ie. up to 265,000 in total per annum). This is envisioned to be possible through the development and projection of an effective marketing image and identity, the efficiency of financial incentives such as the Investment Promotion Act and by providing an ever improving product and value for money to the tourist.

The Plan makes repeated reference to the necessity of sound environmental planning so as:

- not to generate any serious environmental problems.
- to determine and not exceed carrying capacities of resorts and tourist sites.
- to give utmost consideration to continuing and expanding application of environmental protection measures to protected areas and the environment in general.
- to develop and promote ecotourism and nature/adventure tourism (diving, yachting, fishing etc....) in order to expand the tourist market and encourage environmental conservation, by imbuing value to the resource.
- the tourism plan makes frequent reference to the NBSAP and EMPS 2000-2010 and states that it is imperative that they be implemented.

In the section entitled “Environment Impact Assessment and Control measures”, the document projects future utilities and infrastructure requirements of the expanded tourism industry, laying out assessed capacities of various potential sites and specifying the required technologies to be utilised to minimise impacts.

As with the EMPS 2000-2010 the Tourism plan specifies the need for codes of conduct for: tourism developers, operators and tourists and the application of the Green Globe programme to tourism enterprises in Seychelles.

Crucially the Tourism Plan refers to a land use plan to be developed by the Ministry of Land Use and Habitat (MLUH) and how it is essential that this be in line with the tourism land use plans and the Environment Sensitive Area Atlas held and maintained by the MET, and cited under the Environment Protection Act (EPA) 1994.

So clearly the importance of the integrating biodiversity conservation into tourism development and planning has been grasped and conceptualised for implementation 2000-2010; but what is the current status and how have these matters been dealt with in recent years?

The Environment Protection Act (1994) and its Environmental Impact Assessment regulations (1996) are and will be for some time the means by which all physical developments are controlled and the concerns of biodiversity incorporated therein. All developments require environmental authorisation under the EPA and this is distinct from planning approval, and according to the law cannot be overruled by the Planning Authority.

Biodiversity issues are incorporated into the EIA by reference to the sensitive area atlas held and maintained by MET and by specific biodiversity assessments if required.



The atlas includes all known biodiversity sensitive areas, within and outside of existing protected areas, and developments within such areas – eg. the defined coastal zone, biodiverse habitats or ecosystems, the breeding locations of rare species (note all islands apart from the three main populated islands of Mahe, Praslin and La Digue are considered sensitive areas) - are subject to specific conditions imposed by MET or to full EIAs with stakeholder scoping and terms of reference provided by MET.

This in itself if fully implemented should be effective in incorporating biodiversity into tourism developments. However there are shortcomings to implementation.

- The key problem is, without question, the lack of an authoritative, coordinated and implemented National Land Use Plan (NLUP). There is an outdated NLUP but this was never mandated and only utilised by the MLUH as an internal guideline. Without such an authoritative plan EIAs have to be assessed on a case-by-case basis with no overview of the long term accumulative effect of intended and possible developments in any particular ecosystem or habitat type on a national basis. This greatly undermines the efficacy of impact assessment and allows EIA consultants to downplay the impact of any particular single development. (note: there are positive developments in this regard. See 4.3a).
- there is a distinct lack of EIA capacity in the country both in terms of preparation and assessment of EIAs which leads to low quality assessments.
- there is a lack of baseline data, on the status of many systems and species particularly inland water ecosystems, lower plants and invertebrates.

### **3.2 Analysis of Main Perceived Problems and Constraints at the National Level (including negative linkages and threats of tourism to biodiversity conservation).**

#### **3.2.1/2 Political and Economic:**

Where tourism is the primary economic force in a country, decisions regarding it and its development become by nature political and as such any negative feedback to biodiversity from such decisions will be both political and economic. This is of course particularly the case during times of economic stagnation or recession.

This effect is accentuated, in Seychelles, by the fact that environmental economics have not yet been established as a means of assessing true development costs either in terms of principle or local human resources and legislative capacity.

The concept of intrinsic value is however recognised by Government and NGO's where tangible and impending risk of extinction of a species is given due to consideration in development planning.

There is currently no statutory scope for financial incentives to encourage developers to take that "extra step" to consider biodiversity concerns in their planning and implementation.

#### **3.2.3 Social**

As with section 3.2.1/2 it is hard, in the scenario of Seychelles, to differentiate between the economic factors driving the social reaction to tourism and the pure social context.

Clearly, as the main single employer the tourism industry provides broad and considerable benefits to society, however there is no doubt that in certain contexts the social response to tourism has had a negative impact upon biodiversity conservation eg:

- illegal (ie. unlicensed or closed season) harvesting of lobsters for the restaurant trade.
- excessive exploitation of sea shells and illegal harvesting of corals, sea turtles and coco-de-mer nuts to supply the curio and artisanal market.
- coral damage due to irresponsible boat operators - anchor and diving damage.
- excessive disturbance of rare species eg. sea turtles, whalesharks, scops owls by unregulated "ecotourism" operations.

### **3.2. 4/5      Technical/Human Resources:**

The typical scenario in S.I.D.S, with their high infrastructure and technical personnel per capita requirement, results in qualified/technical human resources being a limiting factor. This tends to be true throughout the public sector in particular, where wages for technical/managerial posts are lower than the private sector equivalents.

There is therefore a lack of qualified personnel:

- to undertake monitoring and identify trends in, and hotspots of, biodiversity.
- to undertake taxonomic studies and thereby identify new species particularly of invertebrates and hence baseline data is lacking.
- to undertake and to assess EIAs.
- to monitor and enforce implementation of EIAs in construction and management phases.
- in the tourism sector with understanding of environmental issues.

Consequently there are difficulties in identifying and enforcing good biodiversity practices into tourism development and planning.

On a more technical basis there is no mandated, integrated NLUP (see sec. 3.1) and a lack of:

- integration between sectors, particularly with regard to perspective on landuse and value and importance of biodiversity.
- enforcement of EIA-generated recommendations and management plans.

### **3.2.6      Biodiversity Conservation.**

The NBSAP (1997) identifies loss of habitat and alien species as being the two main factors threatening the indigenous and endemic biodiversity of Seychelles.

Loss of habitat however, comes about from two main factors namely development/change in land use and invasion by alien species. As such alien invasive species present the single greatest threat to biodiversity. This is reinforced when the current distribution of endemic biodiversity is considered. The vast majority of endemic biodiversity is found above an altitude of 200m on the three main islands which is above the main zones of development and for the purposes of this study, the vast majority of tourism developments which are coastal/beach side.

With regard to biodiversity conservation it is also possible to view two main scenarios in Seychelles:

- i) the three main populated islands of Mahe, Praslin and La Digue which are home to about 98-99% of the human population; and

- ii) the other 112 remaining islands and islets the majority of which do not have permanent residents.

The terrestrial and marine biodiversity of these two categories tend to experience different circumstances, problems and pressures, particularly in the case of small isolated islands.

To generalise the populated islands are typified by:

- high land use pressure.
- higher levels of nutrient load and pollution.
- extensive and intensive use of marine resources.
- high degrees of disturbance.
- ecosystems highly secondary and/or remnant/fragmented.
- little scope for overall integrated ecosystem management.

Whereas the smaller islands commonly exhibit

- little land use pressure.
- little or no nutrient load and pollution.
- low intensity of marine resource exploitation.
- lack of human presence/biodiversity management structure.
- ecosystems tend to be more intact though desirable species – sea bird colonies, nesting sea turtle populations – may be heavily threatened or extirpated by uncontrolled poaching activities.
- potential, due to size and relative lack of land use pressures, to implement integrated ecosystem management.
- high vulnerability to alien species the introduction of which can be facilitated by tourism development and activities.

With regard to species conservation, many are restricted to the larger mountainous islands because that is where the necessary ecosystem (eg. mountain forest, mist forest, rock inselbergs) occurs. However, with regard to lowland species, there may be more scope for their conservation on smaller islands which experience less development pressure. Coastal habitat – wetlands and woodlands – are extremely secondary or fragmented on the three main islands and this is in part due to touristic development.

At the genetic level very little is known except for some work on certain endangered species eg. terrestrial land birds and sea turtles. Genetic analysis must be carried out overseas, the costs and logistical requirements of which have proven inhibitory to such research. This hinders the country's ability to assess and maintain genetic diversity within species.

### **3.2.7 Examples of Bad Practices and Failures.**

#### **i) Beach front Development:**

The vast majority of tourist developments are on the coastline so as to enable ready beach access to tourists. Such developments coupled with the desire to provide sea views and the “step-out-of-your-room-on-to-the-beach” concept results in:

- a) dune erosion due to vegetation removal, excessive trampling and landscaping of actual dune structures.
- b) loss of sea turtle nesting sites due to increased human activity on beach, disturbance of nesting turtles, lighting schemes effecting hatchling turtles.
- c) loss of ecosystem; notably wetlands and lowland forest.

ii) Invasive Species Introduction:

On small islands either during development or due to logistical supply of hotel operations – in Seychelles the most damaging introductions are typically rats, cats, dogs, pigs and goats.

iii) Non- Consultative Imposition of Environmental Fees/Taxes:

- a) The concept that protected areas or ecotourism sites should become self-financing through visitor fees is valid. However simple imposition of fees on sites which previously had free access, or the raising of existing fees, without consultation or sufficient advance warning to tour agents, operators and guides can back fire, particularly if there are alternative sites available.

The Marine Park Authority (MPA) in Seychelles was formed in 1997 and the six Marine Parks were taken from direct Government control and placed under its management. The ultimate goal being that the MPA would become self-sufficient on tourism resources. A consequent increase in entrance fees without related improvement of “product” on offer caused many problems with tour operators, yacht-hire companies etc... This resulted in quite drastic policy changes and revisions and the MPA is still not self-sufficient in 2001.

- b) Seychelles has a proud and distinguished environmental record – eg. 47% of landmass enjoys protected status. This undoubtedly results in costs for the country, eg. shortage of land for development and costs of protected area management.

In the late ‘90’s an attempt was made to subsidise these costs by the imposition of a compulsory environmental tax on all visitors of US\$ 100. Value was added to this as visitors would then have had free access to State-managed protected areas – though not private ones – and the revenues raised were to be directed into environmental and biodiversity protection measures.

The concept entitled “The Gold Card” was welcomed by the international press and environmental community. However considerable negative response was received by international tour operators. This was due to Seychelles’ already expensive position in its niche market. It was felt such a levy would result in a steep decline in visitor numbers.

The Gold card was subsequently made optional and shelved, meanwhile investments are being made –creation of STMA see section 1.2/3 – in creating and promoting a new exclusive identity and image of pristine environment and idyllic setting. Thereby re-positioning Seychelles in the market – to be perceived as expensive yet unique and value for money. This it is felt will enable the later creation of an analogous environmental fee scheme, with greater value added, that the market can sustain.

## **4.0 PROPOSED STRATEGIES AND SOLUTIONS.**

### **4.1 Policy Oriented.**

In as much as all proposed strategies and solutions for incorporating biodiversity conservation into the tourism planning sector would involve policy considerations, all primary proposals are detailed here or listed and cross-referenced as appropriate, in no particular order.

- a) Development and implementation of an Integrated Land Use Plan (see 4.3 Technical).  
b) Updating and enforcement of EIA regulations (see 4.4 Human Resources, 4.5 Biodiversity Conservation).

- c) Provision for and creation of habitat corridors (see 4.5 Biodiversity Conservation).
- d) Adoption of internationally recognised green ratings (eg: the Green Globe Programme). This will enable tourists to make an environmental choice when booking their holidays and thereby serve as stimulus for tourist operations to upgrade and maintain environmentally appropriate practices. Factors pertinent to national circumstances particularly endemic biodiversity needs eg: updating of EIA regulations (see Section 4.3 Technical) should be incorporated into the green ratings.
- e) Diversification of Ecotourism and Special Interest Tourism in Seychelles.  
This process has in fact already been initiated through the “Ecotopia Seychelles” unit (see section 1.3) of the MET which will be undertaking:
  - economic viability assessments of existing and potential ecotourism sites and special interest activities.
  - development and facilitation of ecotourism and special interest “package” holidays to appeal to niche markets – eg: diving, sports fishing, bird watching, yachting, turtle and shark watching etc...
  - promotion of such packages and interests in close collaboration with the STMA.
  - development of Seychelles environment societies amongst tourists (eg. Friends of Seychelles) which provide special merchandising and reduced rate holiday opportunities.
  - encouragement, facilitation and promotion of literature, research papers publications, videos etc.. on Seychelles natural history.

Ecotourism, particularly special interest tourism, is considered to have high potential as a high yield low impact market.

- f) Incentives and Environmental Economics (see 4.2 Economic and 4.5 Biodiversity Conservation).
- g) Market Positioning.  
The STMA (see section 1.3) has already commenced the process of developing a new and distinctive image for Seychelles which has been received very well in the international market place. (eg: Seychelles awarded first prize for stall at WTM London 2000). It is hoped that this will:
  - attract more “up-market” tourists in line with Government policy of attracting high paying tourists and thereby gaining maximum revenue per tourist. This is intended to avoid the mass tourism market which is deemed to have overly negative impacts upon environmental, social and cultural factors.

## **4.2 Economic.**

- a) Incentives:  
The Investment Promotions Act, which is cross sectoral in nature, aims to attract investment in to the country and offers various incentives to investors both local and international.

However, it should be modified to offer incentives to investors that pursue and comply to the highest environmental (and biodiversity) standards.

b) Environmental Economics:

The NBSAP (1997) has a project entitled “Introduction of Environmental Economics”, which was classified as a primary priority – this project has yet to be implemented and should be as a matter of urgency.

It is essential that environmental (and of course therefore biodiversity) economics is incorporated into tourism planning so as the “real” cost/benefit analysis of a development can be undertaken.

### 4.3 Technical

a) Integrated Land Use Plan:

Of primary importance, and currently lacking, is the development and finalisation of an integrated land use plan. This is admittedly a process fraught with difficulties and complications not least amongst them the right to property of an individual as recognised by the constitution. As such this process must be undertaken in the most consultative and transparent way possible.

Despite this it is vital due to the very restricted landmass of the country (445km<sup>2</sup>) that this be undertaken. The plan should combine the concerns of the ministry portfolios for Land Use and Habitat, Environment and Transport, Tourism and Agriculture and Marine Resources. This would allow for the biodiversity sensitive atlas and species occurrence/population data to be fully incorporated on a national planning level rather than the current case-by-case basis; and accordingly allow EIAs to view developments on a national incremental basis.

The land use plan should furthermore identify areas suitable for tourism development and determine location, capacity and acceptable activities criteria. This way tourism developments could be conceptualised and implemented from an initial basis of environmental/biodiversity concern rather than trying to mitigate for and incorporate biodiversity considerations around a tourism development that has been designed on an initial basis of commercial considerations only.

Such a plan with its intersectoral implementation and oversight committee – the existing planning authority could fill this role – would form the basis and provide the means for more effective intersectoral coordination. It should be noted at this point that Seychelles has its entire landmass digitised on computer and there are detailed maps and plans of development on the populated islands. This tool is utilised extensively by the Planning Authority and would readily form the basis of an integrated NLUP.

b) Updating and Enforcing of Environment Impact Assessment Regulations:

The EIA regulations need updating in order to incorporate more biodiversity concerns.

The scoping of EIAs does generally include biodiversity criteria and of course the sensitive area atlas reinforces this, however there are some points that require strengthening:

- the current guideline beach set-back for development should become mandatory; and this should include features such as turtle-friendly aspects, lighting schemes, beach activities etc...
- Environmental Management Plans (EMP) should be enforced. EIAs for tourist developments require EMPs to be included but there is little or no follow up on these issues (see section 4.4) except for monitoring of sewage plant function and outflow quality. This is particularly important as most biodiversity considerations:

- landscaping and vegetation schemes.
- appropriate beach management and activities.
- codes of conduct for clients.
- recurrent chemical use – pesticides etc...

are incorporated and covered in the post-development EMP.

c) Licensing and standards for (eco) tourism guides and operators:

- i) Eco-Tourism guides and operators (eg: dive operators, sportsfishing etc...) should be required to attend courses and pass exams (periodically) in order to be licensed (see 4.4 d) in their field of operation, this will enable:
- basic minimum standards of operation.
  - latest and correct natural history information being presented to visitors.
  - codes of conduct being implemented.

#### **4.4 Human Resources.**

a) Upgrading biodiversity monitoring and assessment capacity.

The role of biodiversity assessment is essential in order to develop a baseline from which biodiversity considerations can be incorporated in to planning and development.

An increase in Government commitment to personnel numbers and training will be required to achieve this; but such enhanced capacity would enable:

- baseline monitoring of key species and sites.
- identification of new species and sensitive areas.
- rapid assessment techniques, particularly for freshwater ecosystems, for previously unsurveyed sites.
- creation of a more meaningful and versatile biodiversity sensitive area atlas.
- enhanced EIA preparation assessment and enforcement.

b) Creation of environmental economics capacity: as per implementation of NBSAP project.

c) Incorporate Environment concerns into tourism training:

The ongoing expansion of SHTTC (see section 1.6) could readily and should incorporate environment concerns into its training programmes of the various schools therein.

d) Tourist Guide and Operators standards:

Training courses for guides and operators should be made available to enable minimum criteria for licensing to be established (see 4.3c).

#### **4.5 Biodiversity Conservation:**

a) Provision for and creation of habitat corridors.

The creation of “green” or “habitat” corridors would be of considerable benefit for biodiversity conservation in general on the three main populated islands. In terms of tourism development, it would be of particular pertinence to the coastal ecosystems – dunes, woodlands and inland waters - limiting their fragmentation.

For new developments it could be enabled at the planning stage, and when coupled with an effective biodiversity assessment within the EIA document could be a valuable tool in incorporating biodiversity concerns.

In addition there is scope for incorporating these concerns into existing developments as well, by utilising the State Land and River Reserves Act (1976). This act enables Government to require the retention or planting of woodland/natural vegetation along roads and watercourses and as such could if enforced create a vegetation network throughout much of the coastal plain.

b) Ecotourism as a tool for Biodiversity Conservation:

i) Small and Private Island Operations and Incentives:

Aside from the risk of alien invasion species introduction and the direct destruction of habitat on the development site tourism operations on small islands offer great potential for biodiversity conservation. This is because the capital investment entailed allows for:

- the initiation of biodiversity monitoring and management programmes.
- the presence of humans to impede or actively police against the extensive poaching activities common on uninhabited islands.

Of course these efforts are heightened if the island offers ecotourism attractions as this imbues direct value to the biodiversity in question.

It is recommended that additional incentives be offered to island operations which operate in such a manner, particularly if the islands are alien-predator free.

Such incentives should include:

- tax rebates on biodiversity management/rehabilitation investments (such as rat eradications – it should be noted that to date three private islands have financed rat and cat eradication campaigns).
- provision of a protected status which caters for their tourism activities – current protected status classifications are somewhat preclusive of this.
- control over access to the islands if alien-predator free, as this would allow control over potential pathways of predator introduction and offer the inducement of exclusivity to islands as a further incentive to eradicate rats.

ii) Main islands:

Tourist developments on the three main islands can also have positive effect due to the management structure put in place to oversee the running of the development, these can include:

- ecosystem rehabilitation; ie. planting of native species and removal/control of exotics.
- patrolling and monitoring of turtle beaches to record beachings and nestings (a tourist attraction) and to prevent poaching etc...

iii) Barbarons Biodiversity Centre:

Government has an ongoing project on Mahe island, which offers excellent potential to fund biodiversity conservation goals with tourism revenue. The Biodiversity Centre will have: botanical gardens, nature trails, ex-situ conservation facilities, an interactive natural history museum, a specimen repository, art gallery, research centre, archives etc... It will, when completed, function to meet CBD requirements for ex-situ conservation, public education and awareness and access and benefit sharing. It is anticipated that this centre will be self-financing in the medium term.



#### **4.6 Examples of Best Practice in Linking Tourism Development with Biodiversity Conservation Planning.**

- a) i) Bird Island Hotel and Island Resort.
- ii) Bird Island (55° 12'E, 3° 53'S) is the northernmost island of the Seychelles archipelago and lies some 83km NNW of the main island of Mahe. The island is a sand cay with an area of some 70ha.
- iii) The island was purchased by the current owner in 1967, who cognisant of the tourism potential the island offered, and also the impending opening of Seychelles International Airport, built a small hotel and runway on the island (1971-1973). Today following reconstruction and various modifications the hotel which has a central complex (restaurant, bar, reception etc...) and private luxury residential chalets has a capacity of 55 visitors (S. Robert pers comm. 2000). The island has an on-site manager and 35 staff and a bookings office on Mahe.
- iv) The main objectives of the owners (G. Savy pers comm. 2001) were to:
- run a profitable enterprise
  - consolidate the human settlement
  - provide for the coexistence of wildlife and humans on the island.

What, however, rapidly became clear to the owner was to what extent the wildlife on the island formed an attraction and feature to tourists. It became apparent that dual management for conservation and tourism purposes was not only viable but also profitable. This has resulted in the following achievements:

- vegetation management programme enabling increase of sooty tern population from 120,000 pairs, 1966 (Ridley and Percy 1966) through 395,000 pairs 1973 (Feare 1979) to 545,000 pairs in 1996 (Feare and Gill 1996).
- rat (*R. rattus*) and rabbit eradication in 1995.
- management and protection of nesting turtles (hawksbill turtle 25-50 nesting females p/a, Green turtle 10-12 nesting females p/a – Dr. J. Mortimer pers comm. 2001) since mid-1990's and successfully involving tourists in the monitoring programme.

- 4.6 b** i) Vallee-de-Mai Nature Reserve.
- ii) The Vallee-de-Mai is situated in the interior of Praslin island, east of the Nouvelles Decouvertes estate adjacent to the inland road and has an area of 19.2 hectares.
- iii) Since 1989 the reserve has been managed by the SIF, which has a shop and information centre on site, and provides staff and a warden for the reserve. SIF has a head office and secretariat on the island of Mahe.
- iv) The reserve was established to preserve the ancient endemic palm forest, most notably the coco-de-mer palm, and the ecosystem it supports. (Declared a Nature reserve 1966 and World Heritage site 1982). In more recent years it has been run as a major tourist attraction - 53,419 paying visitors in 1999. The site has proven to be very profitable and its revenues support the management of Seychelles' other world heritage site Aldabra special reserve.

Constraints being faced include:

- lack of legislation catered to the specific needs of the Vallee-de-Mai operation.
- path erosion by increasing number of visitors.
- space for additional facilities eg: parking and toilets.

4.6 c i Cousin Island Special Reserve.

ii) Location:

Cousin island is a small (27ha) granitic island situated some 3km North West of the island of Praslin.

iii) Management and Coordination:

Initially managed by the International Council for Bird Preservation (ICBP) latterly known as BirdLife International (1968-1998) this privately owned reserve is now managed by the locally registered association BirdLife Seychelles. The island has a resident staff of wardens and BirdLife Seychelles has a head office on Mahe.

iv) Objectives:

The island was initially bought (1968) to save the Seychelles Warbler (*Acrocephalus sechellensis*), which at that time was restricted to the island and numbered only 20-30 individuals.

The main goals in the latest Management Plan (1999-2003) include:

- maintenance of the island's ecosystem
- enhancement of biodiversity through management
- showcase for ecosystem conservation maximising environmental education and public awareness.

Achievements:

- continuous management for over 30 years based on management plans.
- restoration of native woodland.
- rescue of Seychelles warbler, populations now established on two more islands, and total population approx. 1500.
- seabird colony (7 breeding species) protected and greatly increased.
- 2 other endangered terrestrial bird species protected on island (including establishment of Seychelles Magpie Robin population).
- longest running intensive hawksbill turtle survey in the world and best hawksbill turtle rookery in SW Indian Ocean (50-100 nesting females p/a).
- self-financing of reserve costs and distribution of economic benefits to locals through controlled tourism (11,528 tourists in 2000).
- substantial research carried out and published.

Constraints: faced include

- availability of trained Seychellois staff.
- capacity of island to hold resident staff without negative impact to biodiversity.
- regulation of peak tourism days in order to maximise quality of visitor experience and minimise disturbance to wildlife.

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