ENVIRONMENT STATISTICS WORKSHOP
ADDIS ABABA, ETHIOPIA, 16 – 20 JULY 2007
COUNTRY PAPER – SEYCHELLES

Prepared by:

Justin Prosper[1] and Jean Michel Mellie[2]

[1] Department of Environment, Seychelles   [2] National Statistics Bureau, Seychelles

1.0 INTRODUCTION

The Seychelles archipelago is situated in the south-west of the Indian Ocean and is made up of over a hundred islands, situated between 4 and 10 degrees south of the Equator.
The majority of the Seychelles population which amounts to approximately 84 000 people live on three of the main granitic islands of Mahe (90%), Praslin (6%) and La Digue (3%).
The total land mass of the Seychelles islands is about 450 square Kilometers and its Exclusive Economic Zone (EEZ) covers a vast area of approximately 1.37 million Km^2
It is therefore understood why economy of the country depends almost entirely on tourism and fisheries.
As we do not have many resources like other bigger countries on the African continent, it is in the country's best interest to preserve and maintain a healthy environment (both terrestrial and marine) for the maximum benefit of our two main pillars of economy as mentioned above. To be able to achieve this, sound data and information on the environment is required so that we can manage our pristine environment in a sustainable manner.

2.0 NATIONAL STATISTICS BUREAU OF SEYCHELLES

The National Statistics was formally created under act in December 2005. This act replaces the old Act of 1965 and is called the "National Statistics Bureau Act, 2005. The Bureau is now an autonomous organisation that is responsible to provide statistics in Seychelles.

Most of the statistics are published by the bureau in its annual report but certain other government departments and public sector agencies do also publish their own statistics. The Bureau works in close collaboration with these organisations.

The main functions of the bureau are:

1. Collect, analyse and publish statistical information.
2. Assist other Departments of the government in the collection and compilation of statistics.
3. Eliminate the duplication of collection of information by government.

4. Promote the use of statistics in Seychelles.

Below are the main Sections of the National Statistics Bureau.

2.1 Tourism

Visitors' statistics are obtained from immigration cards completed by all travelers and they are analyzed in accordance with World Tourism Organization recommendations.

Visitors are classified according to their country of residence rather than their nationality. The purpose of visit and average length of stay are also collected.

Hotel statistics are obtained from information provided by licensed accommodation establishments (hotels, guesthouses and self-catering apartments) on the number of rooms and beds available and occupied.

2.2 Trade

The statistics produced are derived from data collected by the Trades Tax Division. They are analyzed in accordance with the general trade system as recommended by the United Nations.

The headings in the current Seychelles' tariff are based upon those of the Harmonized System [HS] Nomenclature.

Imports are valued C.I.F. (cost, insurance and freight) whilst exports and re-exports are valued F.O.B. (free on board), excluding international freight charges and insurance costs.

Trade statistics are published on a quarterly and annual basis by country of origin, destination and value and quantity.

The Central Bank of Seychelles compiles figures for the Balance of Payments.

2.3 Census and surveys

This unit is responsible for the execution of the Population and Housing Censuses and other household surveys, namely the Household Budget Survey and the Labour Force Survey.

The last Population & Housing Census was carried out in August 2002 and the report together with an Atlas (which was produced for the first time) was published in December 2005. The next Population & Housing Census is scheduled for 2010.

A Labour Force Survey has just been completed. The results are expected to be ready before the end of 2007.

A Household Budget Survey is nearing its completion.

2.4 Employment

Data on formal employment from the private, parastatal and government sectors and the industries are classified on the ISIC Rev3 classification. This includes the number of employees and their gross earnings.

Employment and earnings statistical bulletins are published on a quarterly basis.

Data on unemployment, occupational accidents and expatriate employment etc, are collected by the Employment Division.

2.5 National Accounts

The national accounts compiles the macroeconomics statistics pertaining to national accounts and the framework used under the "System of National Accounts, 1968 ("1968 SNA).

The main data published are (a) GDP at current and constant (1986) prices are classified by economic activity and by expenditure (b) Gross National Product (GNP) (c) Capital formation and net lending (+)/borrowing(-), (d) Saving (e) Consumption of fixed capital and (f) Capital transfers from the rest of the world.

The main method for compiling GDP is the production approach. GDP is also compiled using the expenditure approach. Economic activities are classified according to ISIC Rev2.

National accounts statistics are published on an annual basis.

2.6 Consumer price index

The Consumer Price Index (CPI) is compiled monthly and measures the changes in prices of goods and services actually charged to consumers. The index relates to the whole country and to all income groups. The base period for the index is January 2001 = 100 and the COICOP classification is used.
The CPI bulletin is compiled and disseminated monthly, usually four weeks after the reference period.

2.7 Demographic/Social

Demographic data on the human population and their characteristics such as births, deaths, marriages, divorces and migration data are collected from Civil Status records and the Immigration Division.

2.8 Geographical Information Systems (GIS)

The GIS unit mainly serves the requirements of census and survey operations in the provision and update of maps. Presently this unit is using orthophoto base maps to update land structures (mainly housing) which are drawn manually during field exercises. These are then systematically coded and digitized.

In collaboration with the Ministry of Land Use and Habitat (MLUH) work is in progress to digitize the newly defined enumeration areas boundaries and the new housing developments to produce up-to-date maps for forthcoming surveys and censuses. To date structural layers for 8 out of 25 administrative districts have been digitized.

The mapping update has now become a routine exercise, which not only caters for field tools during national censuses and household surveys but provides listings that serve as the most up-to-date sampling frame and also provides intercensal estimates on the number of houses.

The National Statistics Bureau has also produced a Census Atlas, in addition to its 2002 Population and Housing Census Report. The Census Atlas which is a first for Seychelles and for the NSB provides spatial analysis of data and provides an interesting means of communicating demographic, housing and household information more effectively to all users of data.

This Atlas is a thematic representation of various attributes using maps. These maps also demonstrate the capability of GIS in statistical and spatial analysis. They show some of the population; housing and household characteristic in Seychelles based on the 2002 Population and Housing Census.

2.9 Other Statistics

Statistics on production indicators of economically significant production commodities (food, non-food and services) are also compiled and published quarterly.

Education and Health Statistics are published on an annual basis by their respective Ministries.

3.0 THE DEPARTMENT OF ENVIRONMENT

The Department of Environment is part of the Ministry of Environment, Natural Resources and Transport which is one of the biggest Ministries in the Seychelles. The Department tackles mostly all issues pertaining to the environment of Seychelles.

The different departments of the environment collect all sorts of environmental data and information pertaining to their respective sections and divisions. Below are listed some of the types of data collected, compiled and distributed as per the respective sections and divisions.

3.1 Conservation

- Turtle beach surveys
- Dead or rescued turtles surveys
- Scops owl monitoring
- Kestrel monitoring
- White eye vegetation surveys
- White eye ringing and sightings
- White eye monitoring
- White eye nest records
- Bird eggs collection
- Sheath tailed bat monitoring
- Insects count
- Sooty tern population estimates
- Populations estimates of other sea birds
- Other seabird's sightings
- Poaching incidents
- Colony location
- Wedge tailed and Audubon's shearwater pollutions estimates
- Cattle egret and turnstone monitoring

3.2 Forestry

Nursery management

- Number of plotted plants, humus collection, top soil collection, seedling

Coastal replanting

- Number and types of plants planted, coastal plant maintenance

Firebreak management

- Dangerous tree feeling in districts, felled, lopped and trimmed

Trail maintenance

- Hectares of trailed maintained, steps reinforcement

Hillside reforestation

- Trees replanted

Control of invasive plants

- Removal of invasive plants such as creepers

Takamaka tree sanitation and injection

- Number of takamaka trees injected and number of biomass burnt

Coco-de-mer management

- Nut collection and sale

Tree feeling and burning applications

- Application received, site visit conducted, application approved, not approved and pending, permit issued, renewed or cancelled

Produce

- Timber sale, other forest produce such as Latanier leaf for thatch roofing,

3.3 Botanical Gardens

Endemic plants

- Types, location, names ex situ propagation method, distribution

Red data leaf

- Species endangered or not status according to IUNC criterias

Plant genetic resources

- Farms plants and foods crops variety

Nursery sales

3.4 Environmental Impact Assessment

- EIA class one
- Planning applications (location, proponent, development, plot number, decisions)
- Preplanning advice (intended use, location)
- Seychelles investment (location development and proponent)

3.5 Pollution and Waste Management Section

- Cottage industry (building types, see what is being proposed is fit, safety tank capacity, surroundings, etc.
- Complaints from general public
- Marine pollution such as oil spill
- Industries and factories monitoring
- Enforcement notices,
- Samplings such as sewage, wastewater, metals etc
- Noise pollutions and air pollution
- Waste management, bin sites, clients litter bins

3.7 Meteorological Office

Upper air sounding

Wind speed and direction, temperature (max, min extreme max and min, average wet bulb) due point, vapour pressure, relative humidity, soil temperature, clouds (type, height etc) visibility, rainfall, sunshine, and atmospheric pressure. Also in terms of marine, tide height and sea surface temperature.

3.8 Environmental Engineering

Beach monitoring

- Beach monitoring profiles

Drainage

- Status of drainage

3.9 Geographical Information Systems (GIS)

The geographical information systems unit of the department of environment holds all geographical (Shape files) files pertaining to the different divisions and sections mentioned above. The unit also has shape files of other organisations assisted outside the Ministry.

Please note that the above list of environmental data is not a complete one, but just one that gives and idea of the types of data and information collated and managed by the Department of Environment. It is to be noted that other organisations such as NGOs also collect a lot of environmental data which are not listed above.

4.0 SITUATION AND CHALLENGES OF ENVIRONMENTAL STATISTICS IN SEYCHELLES

As can be seen and mentioned above, several institutions and organisations collect environmental statistics in the Seychelles. These data are for numerous reasons and are means to facilitate the work of the respective organisations, and to allow them to run their departments in a more efficient and a sustainable manner. These data are the basis of the state of our environment and are used for the general protection our environment. These data are used in numerous studies, either locally and or internationally.

As is the case with other countries, environmental statistics face a lot of challenges in Seychelles. There is no structured manner as to which to data in compiled and anlaysed. Although a lot of data is collected, the specific data are kept together and dealt with according to what specific projects the organisations are working on and practically no correlations are made with other data collected by other organisations.

To give an example of this situations, the Seychelles to date, have no State of the Environment (SoE) report compiled. This is being tackled presently. There exists however other specific reports such as the Marine and Costal Environment Status Report, or data collected under specific projects like Clearing House Mechanisms. These reports and data could and would be served at a later date to help compile our SoE and National Outlook reports. For now, the data collected for these reports and projects are specific to the objectives as stated in the project outputs.

5.0 COORPORATION BETWEEN INSTITUTIONS

There is normally a good coorporation between the different organisations where the sharing of data in concerned in Seychelles. This is particularly true between the different governmental bodies whereby the policy is to assist everyone with their desired data and or information unless deemed confidential. This is no different with environmental data and information.

The Ministry of Environment, Natural Resources and Transport of Seychelles, along with its affiliating organisations which includes parastatals and environmental non-governmental organisations (ENGOS) are the main environmental data and information collectors and distributors in the country. To avoid duplication of work and confusion the above mentioned organisations work closely together and involve each other with their activities so that everyone knows which and what organisations have what data and on what they are working on. This is done via workshops, meetings and seminars whereby representatives from the different afore mentioned organisations are invited. This is not to say that all is well and flawless. Different organisations have different projects and objectives onto which they are working on, involving different stakeholders'. There are differences in opinions on how the work should be done and who should be collecting and holding what data and information.