

## OUTPUT 4.5

# A FIVE-YEAR STRATEGIC PLAN FOR NATIONAL STATISTICS IN BELIZE AND STRATEGIES FOR ITS IMPLEMENTATION, MONITORING AND EVALUATION

### 1. INTRODUCTION

The Central Statistical Office of Belize is in process of working out its change in status to that of a statutory body. The present strategic plan should form part of a strategic plan in which a number of aspects of the working of the institution are discussed. Among the issues addressed are the following:

1. Develop a detailed and prioritized work programme for all divisions of the new agency
2. Propose a capacity-building programme that addresses the short, medium and long-term human resources needs
3. Prepare indicative costs of the resources, including equipment, vehicles and office buildings, that the agency will require to successfully implement its work and capacity-building programmes
4. *Create management systems that will cater to human and financial resources: recruitment procedures, terms and conditions of service as well as financial, accounting and procurement procedures*
5. Identify possible sources of significant revenue generation for the agency
6. *Articulate an information system/ information technology strategy*
7. Propose a mechanism for proper coordination, networking and information sharing among data-producers, users and the wider public
8. Devise a mechanism for the continuous monitoring and evaluation of the strategic plan
9. Make a presentation to stakeholders on the findings

Upon consideration of the draft of this document, the committee decided to exclude activities 4 and 6 above, taking the view that they might have overloaded the consultancy.

The strategic planning process addressed in an earlier document the internal and external environment of the CSO in the form of a SWOT analysis which is reproduced here for ease of reference.

The strengths and weaknesses represent the internal environment and are the aspects of the organization that can be changed by the efforts of staff and management without intervention from a higher administrative body. The opportunities and threats represent the external environment and are those influences, positive or negative, that reside outside the organization that can have bearing on the performance of the organization. The change of status of the CSO is seen as a way to the achievement of improvement in the collection, compilation, analysis and distribution or communication of statistics. The focus of the new organization will therefore be:

Training to upgrade staff

Networking with local, regional & international organizations

Room for expansion in training, staff & equipment

Provide information to local, regional & international organizations

Ability to become knowledgeable of the country, its cultures and its people

Ability to provide statistical services to public & private organizations

Ability to gain credibility through professionalism & output

Table 1  
SWOT Analysis of the CSO

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<p>Department is widely recognized</p> <p>Ability to complete tasks despite limited training of personnel &amp; lack of resources</p> <p>Leading statistics organization</p> <p>Comprehensive overview of economy &amp; society</p> <p>National coverage with quality sampling &amp; fieldwork</p> <p>Solid legal framework to back role &amp; function of organization</p> <p>Exposure &amp; access to all kinds of statistics in the country</p> <p>Statistical Act</p> <p>Data management capability</p> <p>Expertise in all areas of statistics</p>	<p>Poor interpersonal skills</p> <p>Inadequate human and physical resources as well as incentives</p> <p>Unclear channels of communication</p> <p>Lack of confidence in staff</p> <p>Insufficient education of public as to the role &amp; function of the CSO.</p> <p>Lack of accountability from employees</p> <p>Improper approach to dealing with staff who contravene the rules</p> <p>High rate/percentage of staff turnover</p> <p>No intra-office training</p> <p>Poor timeliness of publication of data</p> <p>Lack of documentation of methodology</p> <p>Lack of analysis of statistics produced</p> <p>No detailed job descriptions</p> <p>Uneven treatment of staff</p>
<b>OPPORTUNITIES</b>	<b>THREATS</b>
<p>Training to upgrade staff</p> <p>Networking with local, regional &amp; international organizations</p> <p>Room for expansion in training, staff &amp; equipment</p> <p>Provide info. to local, regional &amp; international organizations</p> <p>Ability to become knowledgeable of the country, its cultures and its people</p> <p>Ability to provide statistical services to public &amp; private organizations</p> <p>Ability to gain credibility through professionalism &amp; output</p>	<p>Job insecurity</p> <p>Lack of recognition of CSO in many quarters</p> <p>Public's lack of understanding for and of statistics</p> <p>Political interference/influence</p> <p>Business culture</p> <p>Financial resources</p>

## 2. PROGRAMME OF WORK

### 2.1 The Strategic plan

The strategic plan is expected to take the organization to greater heights and levels of excellence. It begins with an assessment of the current situation. The Comprehensive Review produced by this consultancy has made an assessment of the CSO. A portion of it is presented here for the purpose of introducing the need to plan strategically. The strategy builds on the identified strengths and opportunities of the CSO and seeks to address the weaknesses and threats. The SWOT analysis lays bare the internal and external environment of the CSO and identifies what can be improved on through the activities of the staff in the CSO. The Opportunities and Threats are external to the CSO if it continues to be a part of the public service. The modernization of the CSO in such a manner as to confer on it a greater degree of autonomy addresses a number of the issues of the external environment. Agility of the new organization and a change of status would go some way towards establishing the position of the modernized CSO to be and appear to be the leader in statistics in Belize. From that position it can effectively bring about cooperation and collaboration with the other statistics-producing organs of the government sector.

The present consultancy is totally harmonious with the National Strategy for the Development of Statistics (NSDS) as enunciated by the PARIS21 Secretariat. The PARIS21 document states: “The NSDS should show where the statistical system is now, how it needs to be developed and how to accomplish this. It should:

- provide an **assessment of the current status** of the NSS (where we are), incorporating a **comprehensive appraisal of statistical outputs** measured against agreed criteria;
- **maintain statistical production and procedures, building on existing activities and on-going processes**, during the design and implementation of the NSDS;
- provide a **vision for national statistics** (where we want to go), **strategies to deliver the vision** (how do we want to get there), which address institutional and organisational constraints and integrate all statistical planning frameworks, and **performance indicators** (how do we know we have arrived): **not just a strategic plan**;
- incorporate **sub-strategies** for leadership and management, financial management, human resources, communications, infrastructure (e.g. information technologies) and dissemination as well as the technical work areas (e.g. national accounts, poverty statistics, health statistics);
- set out an **integrated statistical capacity building programme**, which:
  - i) **builds capacity to implement and adapt the strategy**
  - ii) **turns statistics into information** through analysis, dissemination, publicity and user education

- iii) is **prioritized and timetabled** (not everything can be done at once)
- iv) provides the framework for (annual) implementation **strategic plans**
- v) is **realistic, pragmatic and flexible** enough to cope with changes in priorities, new information needs and lessons learnt and is as easy to accomplish as possible;
- outline the **financing requirements**: responding to user needs but realistic about resources (implies prioritization, sequencing, cost effectiveness: e.g. considers alternative ways of compiling data such as administrative sources and sample surveys).

The foregoing is what the present consultancy has addressed. This has been:

- nationally led and owned, with high level political support and champions;
- demand focused and integrated within national development policy processes
- developed in an inclusive and consultative manner

In addition, the strategy for the development of statistics has:

- Set out an integrated statistical development programme to build capacity to deliver results;
- Addressed institutional and organizational constraints and processes, including resources, for the sustainable development of statistical systems and outputs
- Addressed the need to be client-focused;
- Served as a coherent framework for international support for statistical development.

The approach of MOS (Mission, Objective and Strategy) has been adopted. The omission of the final “T” in the acronym MOST has been due to the recognition that the institute should fine tune its activities in response to its reading of the environment at the time. For instance, it should be free to make use of a jingle as a means of communicating a message to the public or prepare a video highlighting the parts of its work programme that it wishes to communicate for whatever reason. Another tactic for image building would be frequent breakfast meetings with major actors such as the Chamber of Commerce and other interest groups. These are tactics or ways of achieving strategic objectives. These need not be spelled out in a plan. Their appearance in the plan will produce the effect of removing flexibility.

## 2.2 Vision Statement

The suggestion of a vision as provided by the consultant is offered for discussion with a view to its ratification or modification. The suggested vision statement is as follows:

***“The vision of the Statistical Institute of Belize is to become the most effective leader of national statistical systems in the CARICOM region and further afield in the Caribbean, integral to the national planning activity”.***

It is observed that the vision statement is a preview or snapshot of a state in the future. It is therefore not as sharply focused as the mission statement.

### **2.3 Mission Statement**

The CSO in its present state is the foremost data-collecting and disseminating entity in the Government sector. In its Mission Statement, it is committed:

***“...to provide, with the highest degree of integrity and with strict adherence to professional standards, accurate, reliable and timely statistical information to facilitate effective policy and decision-making”.***

The mission statement guides the work of the Organization to ensure its adherence to the organization’s aims and objectives. As such, it is far more pointed and immediately linked with action.

### **2.4 Strategic Objectives**

The Strategic objectives of the Institute that will fulfil the Mission and achieve the Vision are:

1. To coordinate the provision of relevant, timely and accurate integrated statistics to all clients and value-added data to others, for a fee
2. To operate with a consistently high degree of operational efficiency
3. To acquire technical assistance and funds to facilitate the launching and maintenance of the Institute while expanding its revenue base.

Client focus is a major departure from the traditional focus of statistical offices. There has been much discussion concerning the relevance of some statistical series that persist perhaps way past their period of relevance. The new approach of the Institute will be to listen to the demands of the client and satisfy those demands with the best quality statistics that can be assembled. The recognition is that no one organization can provide all of the statistics required. The team approach to satisfying the demand for statistics is therefore the preferred one.

The new organization should be a unit that is lean and mean and aggressive in the anticipation and satisfaction of data needs, while learning from its responses to challenges. It should be a learning organization that is constantly transforming itself, initially by a “big push” into statutory body status and thereafter by continuous change and processes based heavily on information technology. Central to the work programme of the new organization should be recognition of the organization’s value chain and the design of information products and modalities of delivery unmatched either in the past or at present in any data-producing organization.

### **3. STRUCTURE OF THE NEW ORGANIZATION**

#### **3.1 Main areas of focus**

To achieve the excellence as planned, the new organization will place priority on the following areas:

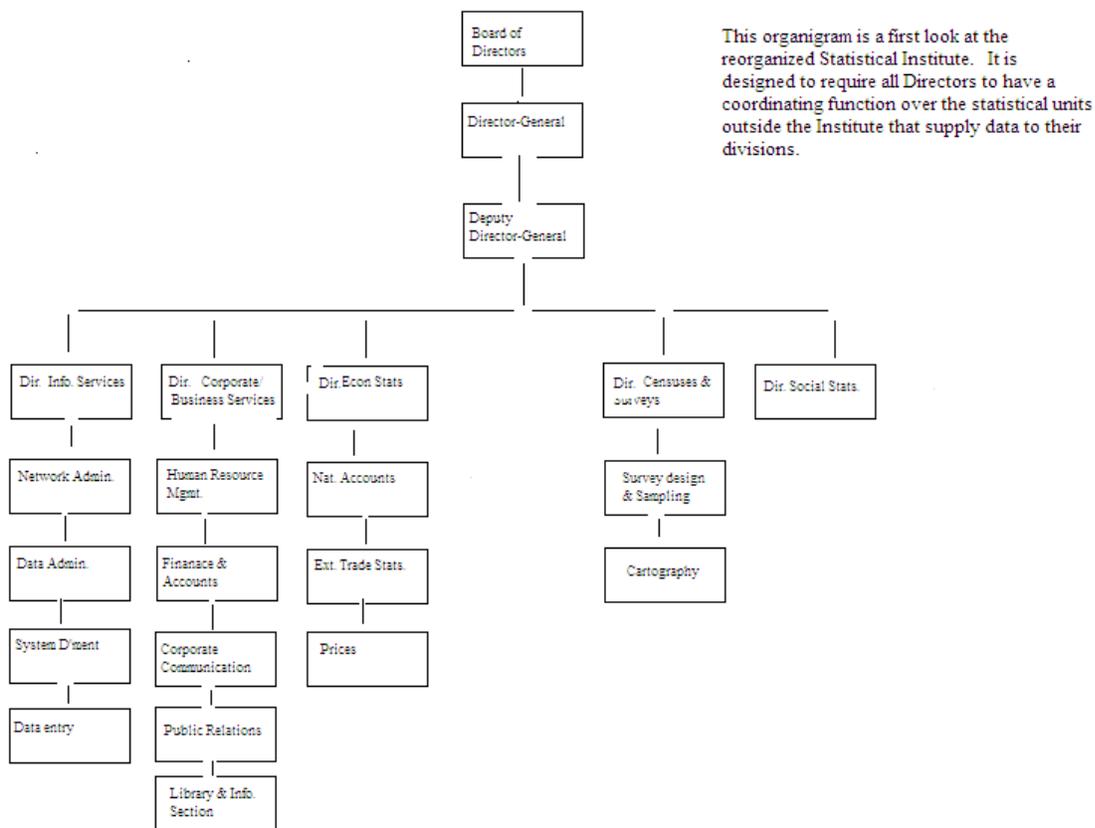
- i) Streamlining of its in-house operations;
- ii) A macro view of the relationship between the Statistical Institute and the rest of the statistical system;
- iii) Coordination of the statistical activities and standards of all statistics-producing organizations in the Government Sector;
- iv) Personnel and the Organization, including training and staff enhancement
- v) Service Activities
- vi) Technology
- vii) Statistics
- viii) Funding and Technical Assistance

The above represent the core capabilities around which the new organization will be built. The fundamentals of these core capabilities are already in place, but must be upgraded for maximized effectiveness. The upgrade process is reflected in the five-year work programme.

### 3.1.1 Streamlining of its in-house operations

Learning from the strategies of statistical organizations studied, changes in the in-house operations of the Institute are proposed. The following Organizational Chart provides a view of how the in-house operations will be organized. The objective taken in the design of the Chart was to make use of the synergies that will attach to the placement together of a group of workers who will possess the same type of background and more or less the same view of the organization insofar as it affects and is affected by their level of enthusiasm.

Chart 1  
Draft Organizational Chart for Statistical Institute



One notes the grouping of the operations into five Directorates, four of which deal with the substantive side of the organization, the fifth being oriented towards the business and facilitation aspects of the organization.

### ***The Directorate of Information Services***

This Directorate is responsible for Network Administration that determines the scope and modality of “crosstalk” across the Institute and between the Institute and the rest of the world. The decision to establish an intranet to serve the communications needs among staff will be taken by the Head of this Directorate. The decision to place the “public domain” statistics on the internet for remote access by all researchers will be made here. This Unit will ensure data security throughout the organization and establish and maintain firewalls.

Data Administration will be done in this Directorate and will design the data capture formats that the institute will adopt while requiring the submission to the Institute in the same format of data from other producers in the system. This Unit will lead the process of establishing relational databases in other data-producing organizations in the system such that they all use the same concepts, definitions, classifications and coding schemes to the extent possible.

Systems Development will be responsible for the inauguration and maintenance of new systems and their preparation for widespread use within and beyond the system.

Data entry will continue to be an area of activity within the new organization for some time, but the importance of this function is expected to decline in the future as data suppliers transfer data to the institute in machine-readable form.

The value of this Directorate to the organization and to the entire statistical system can be estimated in part by the savings that it would bring about by the changes that it would bring to data administration and access. Internally to the Institute, the services to other Directorates and units can be costed (using shadow pricing). This Directorate should be populated by five (5) staff members.

### ***The Directorate of Corporate and Business Services***

This will encompass the common services of the Institute such as the administration, procurement of equipment and supplies. It will in addition standardise the general practices and modus operandi of the Institute.

### **The Human Resource and Finance Unit**

This Unit should comprise four staff members. The Finance and Administration Unit should be manned with sufficient personnel to ensure the smooth running of that function and ensure that staff receive their benefits and any other opportunities that would contribute to their improvement. A one-person unit would not be strategically sufficient to cover for eventualities such as illness, holidays and other causes of absence of the incumbent from office. Corporate Communications and Public Relations may be manned each by one person with both officers responsible for backstopping each other's function.

The need to have on board strong support services that will support the substantive work, provide efficient and timely service to staff, thus facilitating their efficiency and effectiveness cannot be overstated.

### ***The Directorate for Economic Statistics***

This Directorate will comprise National Accounts, External Trade statistics and Prices. The Units within this directorate can provide assistance to each other to support the production of the national accounts. This is a major centre of activity with links to every ministry that produces statistical data. This directorate will make use of both administrative and primary data as collected by the data-collecting organizations and will be a major national data coordinating arm of the Institute. It should be empowered to convene meetings of the statistics units of ministries that input data into the national accounts exercise. Such meetings should result in the revision of ministerial estimates or the re-casting of data to be submitted to the Institute. This directorate should comprise 6 persons.

### ***The Directorate of Censuses and Surveys***

This Directorate will comprise the activities of *survey design and sampling*. With the implementation of the recommendation that the Institute should be central to sample selection, questionnaire design and training in survey methodology and data collection techniques, this unit should play a key role in the work of the Organization and be a major earner of revenue for the organization. The Cartography Unit will seek to re-introduce into the Institute the capability that the Central Statistical Office lost with the re-location out of the CSO of the Environment Statistics Unit earlier in 2005. This directorate should be populated by fourteen (14) persons.

## *The Directorate of Social and Demographic Statistics*

This Directorate should be responsible for integrating the social statistics as produced by the ministries into a national data set that will also speak to the millennium development goals. This arm of the Institute should therefore be closely associated with the Committee that meets on the Indicators for the MDGs. It should be empowered to examine the quality of the data submitted, examining for their characteristic of representing the national reality, while providing for regional analysis that will guide national planning. This Unit should be the focal point for the supply of social statistical data. In its relationship with the suppliers of data, the unit should be empowered to communicate on behalf of the Institute, with the full knowledge of the Management of the Institute. This Unit should be populated by four (4) persons.

The following table indicates the composition of the Institute. Note that the Board Members are not in receipt of salaries but may be paid a stipend. The number of staff included on the table below amounts to 39.

Table 2.  
Composition of the staff of the Institute

The following is an indication of the composition of the staff of the Institute. The Board of Directors does not constitute the staff therefore they are not counted as such.

1. Board of Directors
2. Director General -1
  - a. 1 Executive Secretary
3. Deputy Director General -1
4. Director Human Resources & Finance – 1
  - a. 1 driver
  - b. 1 receptionist / registry clerk
  - c. 1 administrative assistant

5. Director Economic Statistics - 1
  - a. National Accounts -1 Senior Statistician, 1 Statistician, 1 Assistant Statistician
  - b. External Trade & Prices – 1 Statistician & 1 Assistant Statistician
  
6. Director Census and Surveys - 1
  - a. Survey Design and Sampling-1 Senior Statistician, 1 Statistician, 1 Assistant Statistician
  - b. Cartography – 1 GIS / Mapping Specialist, 1 GIS technicians
  - c. Data Collection - 8 district supervisors ( 3 for Belize District and 1 for each of the other five districts)
  
7. Director Social & Demographic Statistics -1
  - a. Population, Families and Household, Health, Education, Poverty, Crime, Housing, Social Security & Welfare– 1 Senior Statistician, 1 Statistician and 1 Assistant Statistician
  
8. Director Information Systems – 1
  - a. Network & Database Administration -1
  - b. Senior Programmer -1
  - c. Data Entry – 2 data entry operators
  
9. Public Relations Officer – 1
  - a. 2 information officers

### 3.1.2 A macro view of the relationship between the Statistical Institute and the rest of the statistical system

A summarized view of the relationship between the Institute and the rest of the system is here presented.

The following diagram puts the Institute at the centre of the system with the responsibility for overview of the system and the collection of intelligence as to the changes occurring in the

environment that impact the need for statistical monitoring. The mechanism for so doing would be periodic meetings between the Institute and all of the other data producers. A suggested periodicity of meetings of this type is quarterly. At these meetings, data needs of the Institute in light of its work programme will be tabled. For example, if there is a data deficit facing the National Accounts Division, the relevant source of that information can be engaged and a discussion as to the solution to the data deficiency be embarked on. The result should be an adjustment in the actions of the supplying office to provide the required data. Similarly, if there is a need for data that should emanate from the Institute, those needs can be raised at the quarterly meetings and the Institute should set about the provision of that dataset. The relationship of data need is two-way and the relationship between the Institute and the rest of the system should be one of “*primus inter pares*” with the leadership being provided by the Institute. The responsibility of the Statistical Institute should therefore justify its position at the centre of the system. The attribute of leadership empowers the Institute to control the quality of data at every stage of its evolution, beginning from the discussion of the need for new data to the output of new data required to the design of the data collection instrument. This means that the Institute should be informed of the existing and new statistical activities and methodologies of the nodes in the system. This is not always the case in the present situation. A major benefit of the quarterly meeting is to avoid duplication of effort on the part of the data producers. This duplication of effort has the tendency to produce respondent fatigue. At those meetings, inter-agency (ministry) collaboration could lead to better data being collected and more cost effectively, as two or more nodes can pool their resources to conduct one survey that can satisfy the data requirements of each of the collaborating nodes with only one call on the respondent. The Institute through the quarterly forum keeps all data producers aware of what each node is working on and sets the stage for horizontal communication between the nodes in a matter that can only result in a more harmonious working relationship. The forum also sets the stage for the Institute to act as a clearing house for primary data collection activities between data-producing organizations.

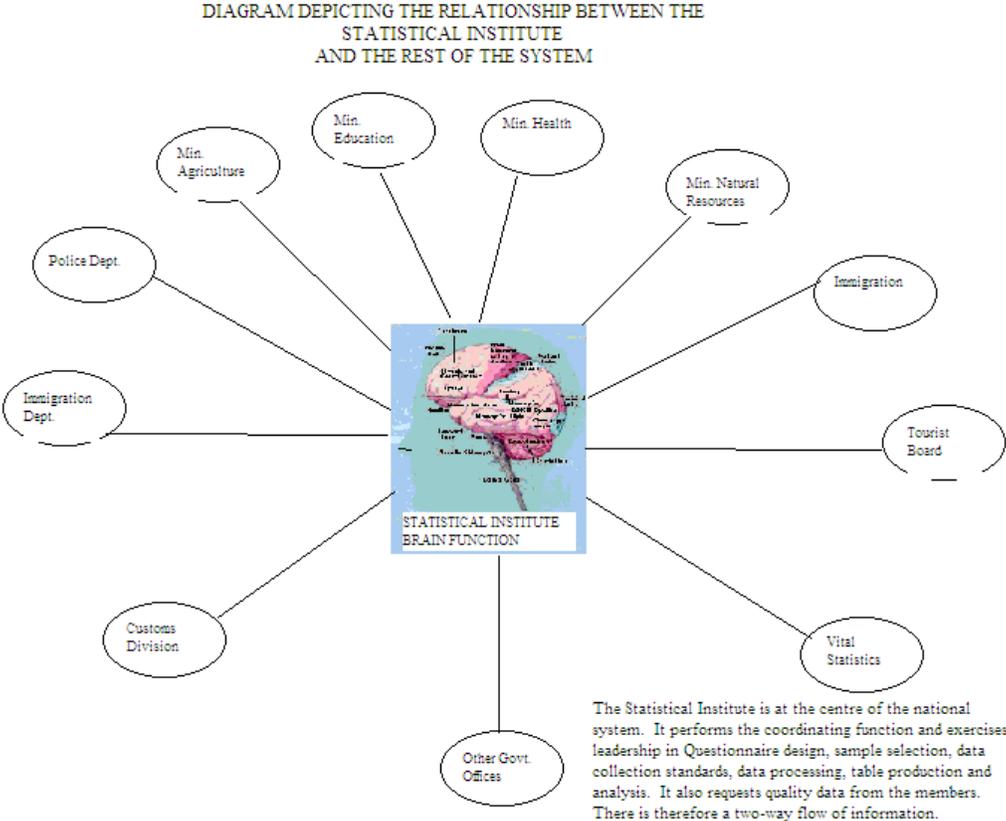
The diagram below presents a view of the relationship between the Statistical Institute and the data-supplying units within Government. The units are not linked administratively to the Institute but enjoy the technical backstopping and upgrades that the Institute will give by way of training. Data flows bi-directionally between the Institute and the ministries in the following sense:

The Institute will meet with the data supplying entities collectively but may do so separately, according to the need for data or information transfer to or from the Institute. The data suppliers produce data in accordance with the agreed concepts and definitions. The periodicity and timing of the datasets are designed to accommodate the requirements of the Ministries as well as of the Institute. To the extent possible, approved software will be used to process data by type, with leeway being given to the ministries to use the software that is most suited to their needs, with the proviso that the Ministries will provide to the Institute data in a given file format.

While the analogy to the brain is used, the understanding is clear that the rest of the system must be kept alert and agile. To do this the ministries will continue to fulfil their work mandates but contribute to the national dataset through their links with the statistical institute. The ministries (nodes) can discover new tendencies or issues that require monitoring and bring these to the attention of the Institute. This will provoke a response from the Institute showing its responsiveness to indications for the monitoring of new issues.

Diagram 1.

A depiction of the relationship between the Institute and the rest of the system



### 3.1.3 Coordination of the statistical activities and standards of all statistics-producing organizations in the Government Sector

A major feature of the relationship between the proposed Statistical Institute and the statistics-producing organizations in the Government Sector has been discussed in the preceding section that dealt with streamlining of the in-house operations. The discussion of the directorates led into a description of how the units of the Institute would relate to the work of the supplying units. The point that has emerged from that discussion is that of technical leadership which must be accompanied by the responsibility for coordinating data and securing collaboration and compliance from the suppliers of input data into the Institute. The relationship is one of *primus inter pares* and should not be looked at as a master-slave relationship. This must be firmly established in the interest of ensuring collaboration and avoiding anything that would appear to be “top-down” orders.

### 3.1.4 Personnel and the Organization, including training and staff enhancement

The new organization will ensure the recruitment of personnel of the quality and calibre that would increase the probability of organizational excellence. At the same time it will ensure that the Institute is endowed with a critical mass of staff to accomplish its work programme. The widened scope of activities of the Institute as opposed to the Central Statistical Office will require a more highly trained and skilled work force with training opportunities being delivered by the Institute. Clearly, this is not business as usual. This is reflected in the discussion of the budgetary implications for training and staff enhancement later in the present document.

### 3.1.5 Service Activities

The Institute is a service-oriented one although one refers to its outputs as “information products”. The major service to be performed by the Institute would be to provide the planning apparatus and the nation as a whole with quality statistics that are internally consistent, thereby enabling the government to enter into planning activities and negotiations with external bodies with a factual base, thereby strengthening the enunciation of their positions. This would create a different balance of power than if the country had to rely on information about itself coming

from negotiators who are seeking their own interests. These service activities include the storage, retrieval, communication and analysis of data and the presentation to personnel who must negotiate on behalf of the government. This concept of service can be extended to the provision of advocacy services to the private sector in a consultancy/advisory capacity, for a fee.

### 3.1.6 Technology

The employment of technology is seen to one of the areas of greatest need for significant upgrade, notwithstanding the fact that this unit is in the present context of the Central Statistical Office contributing significantly to the work of all units of the office and to the CSO as a whole. Its role will be enhanced to the inauguration, in collaboration with substantive divisions or units of the Institute, of an enhanced portfolio of information products, among them being online access to databases. An IT/IS strategy is discussed in Section 4 below.

### 3.1.7 Statistics

The core work of the Institute will continue to be statistics; hence every effort will be made to ensure excellence in the performance of its core function. The Human resource is the main determinant of excellence in statistics and every care will be taken to procure training for staff at all levels. The training plan is presented in table 3 below.

### 3.1.8 Funding and technical assistance

One means of securing the upgrade in Human Resources needed is through training. This training must be funded or secured under another modality. Funding should be viewed as an investment by the Central Government since it is perhaps the greatest beneficiary of the foreseen increased and improved national database. Technical Assistance is available, usually upon request. The Institute should study its detailed training needs and seek technical assistance from the organizations that it knows to be capable of delivering such assistance. Much of this knowledge is already resident in the CSO as the senior staff members have been in contact with most of the funding agencies in an official capacity.

#### 4. AN INFORMATION SYSTEM / INFORMATION TECHNOLOGY STRATEGY

The IT/IS strategy described at caption is put as simply as follows:

*“The Institute intends to utilize its information technology and information systems resources to spearhead the development of saleable information products of relevance to the user community. It will also develop value-added products for which the user must pay to the institution on a cost-of – production- plus basis”.*

The organization is at present well served by the Information Technology Unit. The demand on this unit is expected to increase tremendously as it must be in the forefront of product development, working in a networked mode with subject-matter sections of the organizations, to satisfy user demand. The development of integrated databases is seen as producing a competitive edge over flat file databases where database maintenance, integration and query are limited in comparison with relational databases.

The work programme addresses training and activity in this regard. As a means of facilitating the utility of the information systems capability of the Institute, urgent moves must be taken by the Ministry of National Development to arrange for the attachment of the IT staff of the CSO to ECLAC in Santiago, Chile, to learn REDATAM and create a Census database in respect of the last Population and Housing census, and possibly also the 1990 Census, as well as a trade statistics database for at least 3 years, after which the Institute staff will be able to construct and maintain the databases for succeeding years with minimal technical backstopping from Santiago. There are two staff members on this schedule and in the interest of continuity of work in the Statistical Office in Belize their attachments to CELADE in Santiago, Chile can be consecutive. The recommended period of attachment is one month each.

In addition to REDATAM training, opportunities should be sought to have these two staff members trained at a higher level in Information Systems, one at Master’s level and the other at Bachelor’s level. These two officers should be assisted to acquire expertise in Linux or some other open source platform capable of producing solutions not inferior to the most expensive packages on sale in the market today. These two officers can form the hub around which national training can revolve. This training can be conducted by the Institute for a fee at least twice per year.

In addition to the training as described above, the CSO has placed priority on the acquisition of a capability in Geographic Information Systems (GIS). The establishment of the new Institute will reflect the addition of such a post and will seek to recruit a suitable candidate for the position. The GIS expert will assist the IT and subject matter personnel in producing new information products that can be understood and used by many different types and levels of user. The GIS officer can prepare GIS maps and data dissemination modalities for other ministries at a fee to be paid to the Institute. Of prime importance to the information strategy/information technology strategy is the upgrading of capabilities of staff in that unit. The first upgrade will be the paradigm shift from flat file databases to relational databases supplemented by statistical analysis software.

In order to surmount the problems of expensive software licenses that are payable every year, the Institute can maximize its use of open source software as long as it can deliver the results desired. To this extent, the Institute should receive Government's support in requesting extensive training in REDATAM from CELADE at ECLAC Headquarters in Santiago, CHILE to deliver the training and to work with staff of the Statistical Institute to develop Census and External Trade databases from the same software using the model of CARIBTRADE that was prepared by ECLAC Subregional Headquarters for the Caribbean in a partnership with CELADE. It is important that Government make the request as its intervention will carry more weight than the request of the Chief Statistician acting alone. In addition, the pursuit of open source software such as Linux is recommended as a paradigm that will save the institute large sums of money annually. The gains will be realized from using this type of software as opposed to paying expensive licenses annually for the use of brand name software packages.

The Information Technology strategy will result in the creation of a more robust data management capability in-house that can use the tools of the newly acquired open source paradigm to convert costs of software acquisition to revenue and profits, while improving the capability of staff.

## **Proper coordination, networking and information sharing among data producers, users and the wider public**

The proposal is that the strategic plan for IT and IS should be the pivot for information sharing. In the short term the Institute will continue to use the software and expertise in its possession to ensure that all users receive updated statistics simultaneously. The simple method of provision of data on CD-ROM can be made clearer by versioning, or giving a version number to the CD-ROM so that users will know where they stand in the data upgrade process.

In the medium term, the first networked products will begin to appear. The modality of data-sharing will be remote access to the databases prepared for this type of access and query. The prime example is REDATAM which is being used for the retrieval of Census data in Trinidad and Tobago and St. Lucia. Although these two databases can be inspected by the Belize personnel, the training should be received from CELADE in Santiago, Chile.

Under the modality of remote access, the database will be placed on a website and the remote user can address the URL with a given level of access to the data. He or she can query the database to the extent of the access permission granted him or her. The query yields *html* pages that can be saved on the user's computer or the page can be exported to Excel or ASCII format for further processing or analysis. The proposal of the Institute is that it should assist the other ministries to create hierarchical databases of this type (Agricultural statistics can qualify) and prepare REDATAM databases then have those available on the worldwide web for remote access. The REDATAM format imposes a structure and internal consistency to the data submitted to it that ensures high quality of the output data.

The networking that is necessary will bring the data-producing ministries and organizations under the technical leadership of the Institute. This means that the Ministry will be able to oversee program activities in statistics and ensure through good communications and leadership that ministerial and other statistical outputs are of "nation standard" quality. This will require each head of substantive division in the new organization to maintain contact with the suppliers of data and to ensure that the staffs are kept updated as to the requirements of their datasets. The suppliers of ministerial data should also be aware of the new datasets that are required to address new issues.

*More of this is treated in a discussion on technical assistance for staff of this unit in Section 5 below.*

## 5. FUNDING AND TECHNICAL ASSISTANCE

The following table identifies training needs by Directorate over the five-year plan period and places a costing to each training component.

Table 3  
Training plan

Directorate	Year	Training need	Staff implication	Budgetary implication
Economic Statistics (National Accounts)	2006	Attachment for Head to UNSD in New York to learn latest on National Accounts	Head, Econ. Stats for 1 month	Ticket & per diem for 14 days Total cost = US\$ xxxx
Economic Statistics (External Trade Statistics)	2006	Learn about external trade database and analysis through CAN and MAGIC	One staff member (s/m) to be trained in Port of Spain on CARIBTRADE Trade Database with MAGIC and CAN	Ticket to POS plus per diem expenses
Economic Statistics	2006	Training of 1 s/m at UTEC in Jamaica in Social & Economic Statistics	One s/m to be supported in Jamaica by the Institute	
Economic Statistics	2008	Training of 1 s/m at UTEC in Jamaica in Social & Economic Statistics	One s/m to be supported in Jamaica by the Institute	
Census and Surveys/Social & Demographic Statistics	2006	1 s/m to be trained in sampling at Michigan University	One s/m to be supported in Jamaica by the Institute	
Census and Surveys/Social & Demographic Statistics	2006	1 s/m to be trained at UTEC in Social & Economic Statistics	One s/m to be supported in Jamaica by the Institute	
Census and Surveys/Social & Demographic Statistics	2007	1 s/m to be trained in sampling at Michigan University	One s/m to be supported in Michigan by the Institute	
Information Systems	2006	Learning to create & maintain an External Trade statistics database that is searchable by a remote user	2 s/m to be trained in Santiago, CHILE for 1 month each, consecutively	
Information Systems	2007	Training to Master's level for 1 s/m in Information Systems and web design	One s/m to be supported in USA by the Institute	
	2008	Training to Bachelor's level for 1 s/m in Information	One s/m to be supported in USA by the Institute	

		Systems and web design		
Human Resources & Finance	2006	1. Training in project preparation, management and evaluation 2. Training in the Logical Framework 3. Training in Accounting and Financial Management 4. Training of all staff by HR Division in Performance Appraisal System	Short local courses for staff in work areas indicated. All staff to be trained in Performance Appraisal System	
Human Resources & Finance	2007	1. Training in negotiation skills (senior and middle management staff) 2. Training in conflict management	Short local courses for staff in work areas indicated. Senior management to be trained in conflict management.	
Public Relations	2006	Training in effective presentation of statistical material	2 staff members to be trained in PowerPoint, in report writing and advocacy in the use of statistics	

## **Funding**

### *Training*

Training is seen as one of the most important modalities of raising the level of knowledge, skill and competence of the work force. The strategic plan incorporates a number of areas in which training has been identified. In addition to the costs estimated, the appendix to this paper presents a list of locations and courses that may in addition be checked for training of relevance to the work of the Institute. The strategy for securing training for the staff will be to present project ideas to funding agencies for discussion and development of the idea into a project document. The Institute can seek funding from the United Nations Technical Assistance Fund, among other agencies. Collaboration with the government ministry that maintains links with international training agencies will produce a list of organizations that can be approached. In the case of training I REDATAM and the trade database modelled after CARIBTRADE all that would be required would be two tickets to Santiago and one to Port of Spain, together with the required per diem. Other elements of training are presented in the following table.

### **Funding innovations in statistical programmes**

The Statistical Institute of Belize must undergo a change in energy if it is to succeed in a modernized organizational setting. To the extent that over and above Regional initiatives, each

country is free to pursue bi-lateral relationships with third countries and organizations, the Statistical Institute of Belize will be aggressive in its search for funding to move its datasets forward. To that extent it will seek funding and other modalities of assistance from statistical organizations of excellence. It will by so doing, improve the exposure and capability of its staff. The quantum improvement will be showcased in the year 2010 when the Institute will organize and host a significant International Colloquium on Statistics and Modernization, clearly demonstrating the success of the investment in the modernization of the Statistics capability of the country by way of its increase in statistical datasets of relevance and the improvement of the integrated national statistical system.

The four major areas of focus regarding the core activities of the Institute are the following:

1. Social and Demographic statistics,
2. Censuses and Surveys,
3. Economic statistics and
4. Data re-packaging and access, designed by IT Unit

### **Human Resources**

The main architects of organizational culture and personality are the individuals on the staff of the organization. Attitudes can be encouraged to change by training. The five-year strategic plan aims at encouraging this change by exposing staff to a number of courses that address human interaction. Conflict resolution, negotiation skills and goal-setting are some areas that have been earmarked for attention during the life of the strategic plan. The objective is to assist staff of the Institute to shed past attitudes and views of the job, enabling staff members to move ahead with the energy and positivism that is required to ensure success. On the substantive side, the staff will be upgraded to perform at a higher level of competence through training in areas that will primarily benefit the work programme of the Institute. Over the five-year period, some nine staff members of the Institute should benefit from higher studies. The entire staff will receive training in areas of relevance to their jobs over the period.

The effect of the training programme will be seen and felt in the performance of the Institute during the period 2006 to 2010. The Institute will strike strategic alliances with institutes of excellence, including the University to encourage in-depth research into a number of areas of national importance.

A performance Appraisal System (PAS) will be developed and implemented in collaboration with staff. Staff will be given an opportunity to consult the literature on Performance Appraisal Systems before the design of the system.

### **Creation of management systems that will cater to human and financial resources**

This area of concern and planning will be directed to recruitment procedures, terms and conditions of service as well as financial, accounting and procurement procedures. These systems will recognize the need to be more frugal in the use of organizational budgets. For instance, the need to separate the use of resources for personal purposes as opposed to organizational will be made clear in a manual that will be developed. The consultancy saw at least two such systems in its interaction with statutory bodies as a background to the discussion on the logistics of making the transition to statutory status. This document will be used to inform the staff of the new terms and conditions of service therefore it should be completed, at least in draft form before the offer of employment in the new organization is made. This is more fully discussed in the document that addresses the transition.

### **Code of conduct within the organization**

The CSO (hopefully soon to be Institute) has begun to collect staff manuals from a number of organizations that have preceded it into statutory status. A manual for the institute will be developed before the end of July 2006 in a collaborative venture between the management and staff. The manual will provide policies on a number of issues ranging from attitude towards work, to dress code to personal conduct on and off the job, as long as that conduct impacts on the job. That manual will outline management systems that will cater to human and financial resources, recruitment procedures, terms and conditions of service as well as financial, accounting and procurement procedures. It is yet too early to develop this manual. As soon as a decision is taken by the Government, this document can be developed with the active participation of the staff.

### **Possible sources of significant revenue generation**

The Statistical Institute is not expected to generate revenue at a level that can afford it the ability to pay the salaries of its staff. For a long time to come it will be dependent on the Central Government for subventions to pay staff. It can and will, however, develop activities that can

earn revenue and continue to develop these until the revenue take is relatively significant. Activities that must come into prominence in the development of the strategic plan are the following:

- the development of databases;
- the (re-)packaging of information
- training in statistics and the scientific method to personnel from other organizations;
- consultancy services in areas such as questionnaire development, sample selection and the conduct of sample surveys on behalf of clients and;
- the development of the organization's value chain

The value chain activity depends on the leveraging of information technology and systems to produce synergy between the various work areas of the organization to ensure its most effective competitive advantage.

It is difficult to estimate with accuracy the training bill for 2006, let alone for the entire five years for reasons well known in an age where rapidity of change is the order of the day. In order to comply with the mandate of the TOR, an estimate has been proffered with the caveat that presents an order of magnitude in the absence of a concrete training proposal based on an identified course and its duration at the time of writing. It is expected that adequate funds will be provided, through the budgetary process and technical support, to fund the operations of the Institute and the modernization process. An estimate based on the familiarity of the CSO with training costs puts the training figure over the plan period to Bze \$ 1.1 million.

#### *Regular Budget (recurrent expenditure)*

The salary bill at present is indicated by the remuneration to the jobs as described in the following table. The listing does not produce a total wage bill, as there are job titles that are held by more than one staff member. Nevertheless, it is useful in that it represents the minimum expected salary per post in the new organization. In exchange for the new status and changed work conditions, the salary increase should not be less than 33 percent, across the board. An effective guide would be to find comparator jobs in the other statutory bodies and find the average remuneration per job (title). The new salary should not be below that average.

Table 4

## Present remuneration of CSO staff by job designation

<b>PERMANENT STAFF</b>	<b>POST</b>	<b>SALARY PER ANNUM/PERSON</b>
	Chief Statistician	63,750
	Deputy Chief Statistician	54,264
	Administrative Officer I	47,036
	Statistician I	35,496
	Statistician II	35,352
	Cartographer	27,288
	Systems Administrator	28,884
	Statistical Officer	28,884
	Programmer	20,940
	Secretary I	26,745
	District Supervisor	23,436
	Statistical Assistant	23,436
	Data Entry Operator	16,188
	Driver/ Handyman	11,148
	Second Class Clerk	14,628
<b>OPEN VOTE STAFF</b>		
	Cleaners	4,212
	Groundsman	1,200

Please note that categories having more than one officer, the amounts quoted are the highest.  
Due to salary freeze, no increment was awarded to officers for this year.

**Indicative costs of the resources, including equipment, vehicles and office buildings that the agency will require to successfully implement its work and capacity-building programmes**

An estimate of the Recurrent and Capital expenses over the period 2006/07 through 2010/11 as provided in table 5 below by the CSO reveals the following:

Table 5  
Indicative costing of resources – Belize Dollars

	2006/07	2007/08	2008/09	2009/10	2010/11
Wages & Salaries	1,600,000	1,672,000	1,747,240	1,825,866	1,908,030
Social Security	33,360	33,360	33,360	33,360	33,360
Pensions and insurance	160,000	167,200	174,724	182,587	190,803
Allowances	120,000	125,400	131,043	136,940	143,102
Materials and supplies	150,000	156,750	163,804	171,175	178,878
Vehicle maintenance	72,000	75,240	78,626	82,164	85,861
Other maintenance	77,800	81,301	84,960	88,783	92,778
Utilities	120,000	125,400	131,043	136,940	143,102
Rental	21,600	21,600	21,600	23,760	23,760
<b>Total Recurrent Expenses</b>	<b>2,354,760</b>	<b>2,458,251</b>	<b>2,566,399</b>	<b>2,681,574</b>	<b>2,799,675</b>
Training	304,000	204,000	304,000	144,000	144,000
Publicity campaign	100,000	50,000			
Vehicles	200,000				
Motor Scooters	56,000				
Computer equipment	300,000				
Furniture	200,000				
Office building	1,000,000				
<b>Total Capital Expenses</b>	<b>2,160,000</b>	<b>254,000</b>	<b>304,000</b>	<b>144,000</b>	<b>144,000</b>
Contingency	451,476	271,225	287,040	282,557	294,367
<b>Grand Total</b>	<b>4,966,236</b>	<b>2,983,476</b>	<b>3,157,439</b>	<b>3,108,131</b>	<b>3,238,042</b>

**An approach to costing the work of the units**

To the extent that the work of the institute will have to be costed and constantly monitored for economic performance, activity-based costing will be employed. This would require each job to be costed as if it were a project. Training in the logical framework as used by the European Union will provide staff with the tools to conduct the costing. In addition, the project

management thrust will enable the conceptualization of new work for which funding is being sought and its presentation in a coherent and internally consistent manner. The Institute is expected to generate some revenue from the sale of information and through consultancy services offered to the nation and beyond.

### **Key outputs**

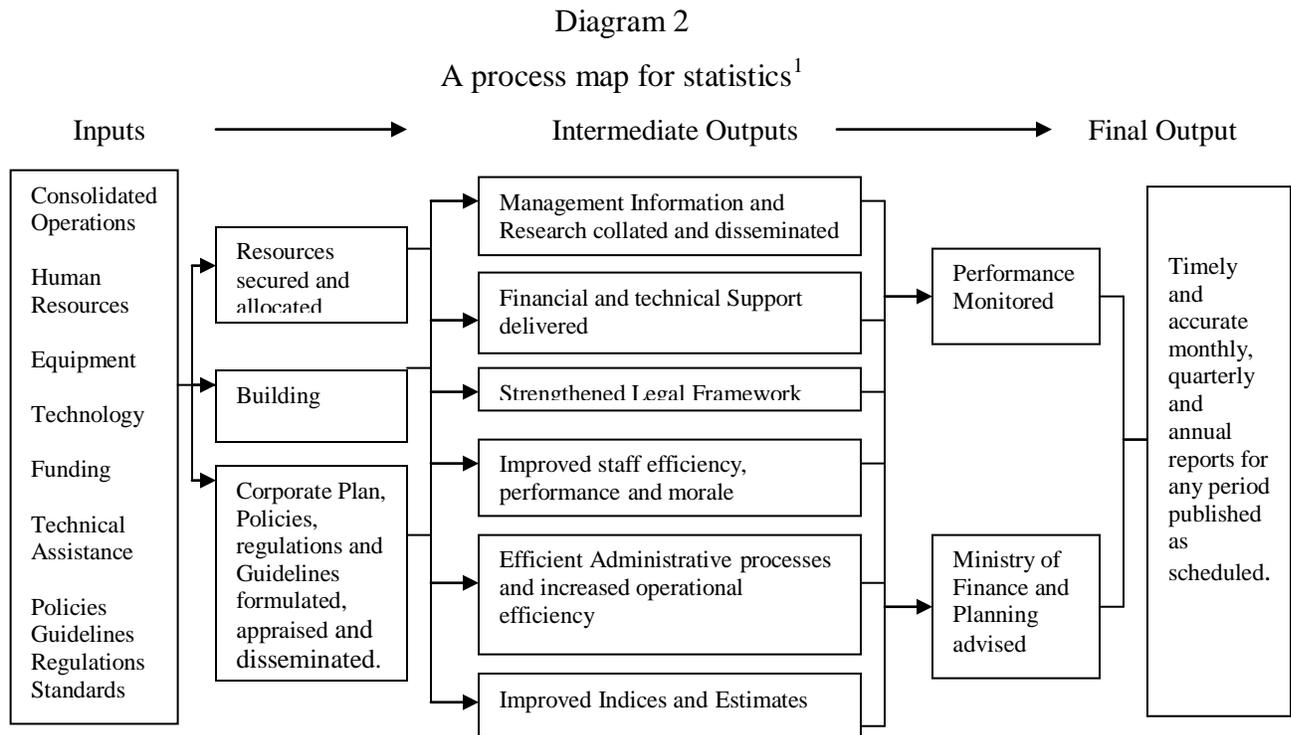
The key processes of the proposed Statistical Institute of Belize are set out in the following output map. This map shows how the Institute will realise its final outputs from its major inputs through the delivery of a number of intermediate outputs. For example, the role of the common services units such as Human resources, Procurement, Information Technology, Finance and institutional operating procedures come together to procure the resources necessary for use in the production of information products. Examples of procured items are given in the second column and may include plant, machinery, supplies including data from other organizations, meta-data concerning the incoming tabular inputs, the application of the corporate plan and policies or manners in which certain situations will be handled.

The third column represents intermediate inputs. An intermediate input, as the name suggests, is a product (usually a service in the case of an information-producing organization), the production of management information or research results that have been collated. The intermediate outputs will include feedback (coaching or training) to the organizations that supply data that need to be treated in a different manner. The feedback to the supplying agency does not constitute a final output, but is an output that is considered intermediate, or produced on the way to securing a final output. The financial and technical support delivered by the institute constitutes another element of intermediate output, given the concept of intermediate as opposed to final output that has already been explained. During the course of production of its work, the Institute may have to re-visit its Act in order to deal with a matter arising. The solution of the problem may involve the making of an amendment to the Act that should have the effect of “plugging a loophole”. During the process of producing tabular and other information outputs, improved staff efficiency, performance and morale may be produced through the instrumentation of, for example, the Human Resource Directorate or through the improvement in efficiency of administrative processes and increased operational efficiency such as those provided by an improved value chain.

An index is an imprecise measure of a concept that cannot be measured directly. It is however useful to gain an appreciation of quantitative and directional change as a result of the manner in

which it combines the movements of several or many variables into one figure – the index. The index is used to impart greater accuracy to an estimate that will go forwarding the form of a final figure or official estimate. Such indices or estimates are intermediate outputs of the statistical process. The many worksheets that support the national accounts estimates that are published are a good example of intermediate outputs. Other examples of intermediate outputs are the monitoring of performance of the data supplied to the Ministry of Finance or other relevant Ministry as well as the qualifiers to the data, i.e. quality alerts that should accompany the estimates.

The last column, the Final output, consists of the timely and accurate statistics that are published or otherwise communicated with pre-arranged periodicity. The process map therefore shows the actions and by-products involved in the production of statistics, much in the same manner as the description of a manufacturing process. Diagram 2 below is the process map for statistics.



<sup>1</sup> Adapted from a similar diagram as produced by the Statistical Institute of Jamaica

## **A mechanism for the continuous monitoring and evaluation of the strategic plan**

### Performance targets and indicators

The present CSO operates with performance targets that are output-based. The proposed publication dates for various statistics are seriously regarded. Indeed, the World Bank and the IMF look carefully at performance through the adherence to the delivery targets in addition to quality indicators of work done by examining the methodologies used in a given statistical computation<sup>2</sup>. The release dates of established series will continue to be monitored and improved. The Institute will move towards the improvement of its statistical coverage. In addition, the Institute will monitor progress in the upgrading of the quality of statistics from other members of the statistical system.

Thought will be given to the best way in which a points system can be applied to completed outputs from which a completion rate can be calculated. The completion (achievement) rate (measured as a percentage) can be compared from year to year to yield a trend. Management decisions can be made consequent upon the observation of the trend in the completion rate of the organization.

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<sup>2</sup> The requirements of the General Data Dissemination System (GDDS) of the IMF and the World Bank should be subscribed to as a major modality for quality assurance in the production of national statistics.

**A list of places where training of relevance can be found**

**University of Southampton**

B.Sc in Population Sciences;

M.Sc in Social Statistics

M.Sc in official Statistics

**University of Lancaster**

B.Sc in Applied Social Statistics

M. Sc in Applied Social Statistics

**University of the West Indies (Mona, Jamaica)**

Bess Programme

**University of Michigan**

Summer program in Quantitative Methods in Social Research

Survey Methodology – M.Sc programme

**Economic Commission for Latin America and the Caribbean, CHILE**

Training in REDATAM and creation of Census and Trade Statistical Databases for two years/periods