



The World Bank
Sana'a
Rep. Of Yemen



Republic of Yemen
Ministry of Planning and Int. Coop.
Central Statistical Organization

STATISTICAL MASTER PLAN

YEMEN

2006 - 2010

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List of Acronyms

BOP	- Balance of Payment
CPI	- Consumer price index
CSO	- Central Statistical Office
CBY	- Central Bank of Yemen
DAC	- Development action committee
DFID	- Department for International Cooperation (United Kingdom)
DOTS	- Directly observed treatment short course
ECWA	- Economic Commission for West Asia
ESCAP	- United Nations Economic and Social Commission for Asia and the Pacific
FAO	- Food and Agriculture Organization
GDDS	- General Data Dissemination System
GDP	- Gross domestic product
GFS	- Government Finance Statistics
HIES	- household income and expenditure survey
HIPC	- Highly indebted poor country
HQ	- Headquarters
IBES	- Integrated business enterprise survey
ILO	- International Labor Organization
IMF	- International Monetary Fund
IT	- Information technology
ITU	- International Telecommunication Union
LAN	- Local area network
LSMS	- Living standards measurement study (or survey)
MAC	- Ministerial Advisory Committee
MDG	- Millennium Development Goals
MICS	- Multiple indicators clusters survey
MOF	- Ministry of Finance
MPS	- Material Product System
NA	- National Accounts
NGO	- Non-governmental organization
NMP	- Net material product
ODA	- Official Development Assistance
OECD	- Organization for Economic Cooperation and Development
PARIS21	- Partnership in Statistics for the 21st Century
PC	- Personal computer
PPP	- Purchasing power parity
SDDS	- Standard data dissemination standards
SIAP	- Statistical Institute for Asia and the Pacific
SITC	- Standard international trade classification
SMP	- Statistics Master Plan
SNA	- System of National Accounts
TQM	- Total quality management
UN	- United Nations
UNCTAD	- United Nations Conference on Trade and Development

UNDP	- United Nations Development Program
UNEP	- United Nations Environment Program
UNESCO	- United Nations Educational, Scientific and Cultural Organization
UNFPA	- United Nations Fund for Population Activities
UNICEF	- United Nations Children Fund
UNIFEM	- United Nations Development Fund for Women
UNSD	- United Nations Statistics Division
USAID	- United States Agency for International Development
WFP	- World Food Program
WHO	- World Health Organization
WTO	- World Trade Organization

ACKNOWLEDGEMENTS

The Statistical Master Plan presented in this document has been prepared in response to a request from Dr. Amin Muhie Al-Din, Chairman of the Central Statistical Organization, Yemen. Although Yemen has in recent years been the beneficiary of donor support in its efforts to develop its statistical system, the authorities recognize that further support will be needed if a sustainable statistical system is to emerge. The authorities, taking note of the World Bank's new initiative for helping countries develop their statistical capacities under its STATCAP Program, sought assistance from the World Bank in the preparation of a Statistical Master Plan. This represents a first step towards seeking a loan/credit from the Bank to finance an overall five year program for capacity building.

Datuk R. Chander and Mr. V.T. Palan were hired by the Bank as Consultants to collaborate with CSO in the preparation of this strategic plan. The Plan has been drafted by the consultants after extensive consultations with the Chairman and senior staff at CSO, officials of key Ministries, Government agencies, and representatives of a number of international agencies. [A draft version of the Plan was presented at a well attended workshop in Sana'a in March 2004. Following the workshop, the draft document was revised.](#) In brief, the preparation of the Plan had the benefit of inputs from key stakeholders within the country obtained during visits to Yemen by the two Consultants.

The Consultants would like to acknowledge the high degree of cooperation they received from Yemeni officials who went out of their way to provide documentation, their assessment of perceived needs and aspirations for the future of the statistical system. Special thanks are due to Dr Muheeddin, [Mr. Robert Hindle, the World Bank's Resident Representative in Yemen](#), Mr. John Macgregor, Senior Operations Officer, and Mr. Neil Fantom, DEC, World Bank, for their support.

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V. T. Palan

YEMEN: STATISTICAL MASTER PLAN

Part I: An Assessment of Current Capacity

1.1 Historical Background

Yemen has historically occupied a pivotal role in the Arabian Peninsula. Its name 'Yemen' meaning 'in the south' got its name from its location on the Southern part of the Arabian Peninsula. Yemen was a passage route for International trade in the Old World, with its ancient sea ports of Makha, Mawza'a and Quna. Historically, Yemen was deeply involved in the Persian – Byzantine power conflict. The Persians had sway over Yemen until the arrival of Islam in 628 AD.

Yemen was made up of several small states and semi independent kingdoms. It was an important center of Islamic learning with the Great Mosque of Sana'a playing a major role. Yemen gained strategic importance to European powers attempting to secure trade routes to India. The British occupied the port of Aden to safe guard their routes through the Red Sea, while the Turks took control of the northern part of Yemen. Following the end of the Ottoman Empire, North Yemen became a monarchy. The Monarchy was succeeded by the Yemen Arab Republic, following the 70 days siege of the city of Sana'a. The British Crown colony of Aden and the Aden Protectorate of 1300 tribal chiefs, upon gaining independence, became a Soviet style "Peoples Republic of Yemen" - the only declared communist state in the Arab region.

The two states were unified in May 1990. Despite unification, the new country did not for the next 3 years witness much political or economic stability. The Gulf war brought considerable economic hardship to the nation, with the return of almost 1 million workers from the neighboring Arab States. Yemen is classified as one of the Least Developed Countries (LDC), with a GDP per capita of US\$ 473/ or Yemeni Rials 83253 in 2002.

The unification led to the merger of the statistical systems of the two states and the creation of a new Central Statistical Organization (CSO) in 1990. The Statistical Act of 1995 provides the legal underpinnings for the statistical system¹. The unified CSO faced the challenge of having to reconcile itself to the different modes of operation, organizational structures and types of responsibility. The statistical system of the South operated inherently in the Soviet mode of data collection with emphasis on a system of complete reporting catering to the needs of a centrally planned economy. The system in the North was rather rudimentary.

The CSO has been the recipient of sizable financial and technical support from bilateral and multilateral agencies. Over the last 7 to 8 years several donors such as The World Bank, the International Monetary Fund, the Governments of Germany and Japan have funded operations largely by supporting specific surveys.

¹ Key elements of the Statistics Act are reproduced in Annex I

1.2 Evolution of the Current Statistical System

Administratively, the Republic of Yemen is divided into 20 Governorates (Mohataza), in addition to the Capital City of Sana'a. The Governorates are in turn divided into 332 Districts (Mudiriah). There are 2080 sub districts (Ozzlah). The sub districts are divided into 37,598 villages/cities (Kariah/Madinah) and 68,215 localities (Mahalla).

The city of Sana'a is the historical and political capital of the Republic and is located in the Central Highlands, at an elevation of 2200 meters above sea level. Some 1.7 million (as per the preliminary results of the General Population, Housing, and Establishments Census 2004) live in the Sana'a City.

We Find that the People's Republic of Yemen (South Yemen), with Aden as the capital city, has followed the statistical model of the former USSR in terms of data collection and processing. The statistical office in Aden had about 300-500 staff members, with a considerable amount of decentralization. In addition, excess overlapping of staff roles existed, and several branch offices operated on the governorate and district (Modeeriah) levels.

As for the former Republic of Yemen (North Yemen), a different statistical structure existed, characterized by a smaller number of staff (less than 200), with a different line of responsibilities, and no governorate or district offices.

North Yemen's Central Statistical Office was a General Department that consisted of 6 departments, within the Central Planning Organization, as follows:

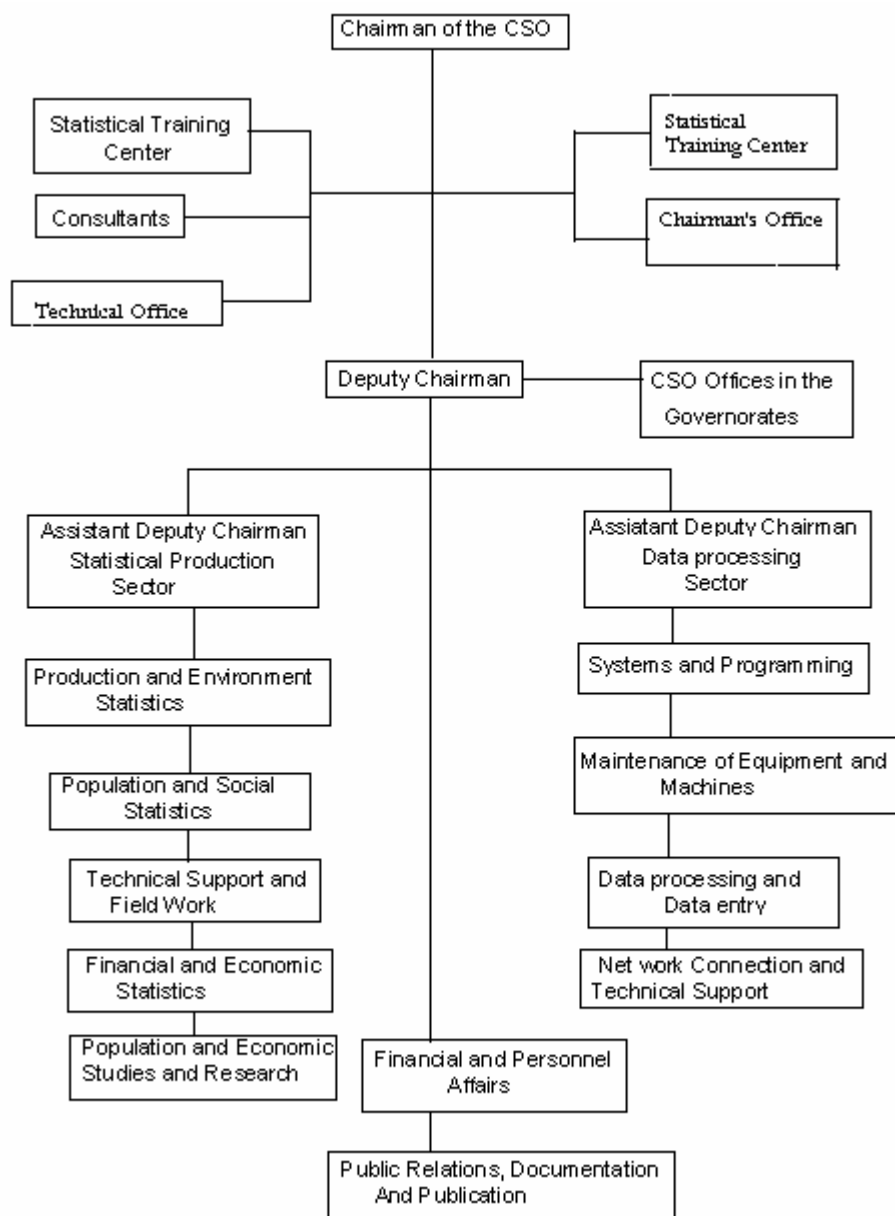
- o Department of the National Accounts.
- o Department of Foreign Trade.
- o Center of Demographic Studies.
- o Department of Social and Demographic statistics.
- o Department of Industrial, Energy, and Construction Statistics.
- o Department Internal Trade, Transportation, and Telecommunication Statistics.

The merger of the two systems entailed several compromises. All of the key areas of data collection and central responsibilities and management moved to Sana'a. But it was not possible to streamline the operations immediately, especially in terms of staff and functional rationalization. This historical legacy is still reflected in many ways, especially in terms of staffing at the Governorate level.

The organizational structure of the CSO in 1995 took on a more 'rational' approach, with a Chairman, Deputy Chairman and 3 Assistant Deputy Chairmen, two with a number of departments each, within two sectors, under their direct control, and the third as Head of the Technical Office. The branch offices at the Governorate level were put under direct control of the Deputy Director.

The 1995 CSO organizational structure was as follows:

The Organizational Structure of the CSO in 1995



The CSO, in terms of the organizational structure, is now in a 'transitional phase'. A new organizational structure, with detailed listing of responsibilities was approved by the President of the Republic of Yemen on 1 November 2003. It is important to note key aspects of this document. The document entitled "Draft Republican Act No (233) for the year 2003 on the Organizational Structure of the CSO" covers among other things the duties and functions of the CSO and key appointees.²

² An unofficial translation of the document is reproduced in Annex (III) to this report.

1.3 The Objectives and Activities of the CSO

Among other things, the decree states that the CSO should "... create a unified Statistical system that facilitates the government's development needs and senses the changing and ever improving technologies". It goes on to say that the CSO has the responsibility for "... approving statistical information produced by others after checking for its reliability and permitting its dissemination". The CSO in carrying out its mandate has to consciously help in " building a consensus among CSO and government employees about the vital importance of Statistics for development planning" and "devise statistical systems and programs for training of the CSO staff at the Head Quarters and branch offices and government's staff and collaborate with concerned parties."

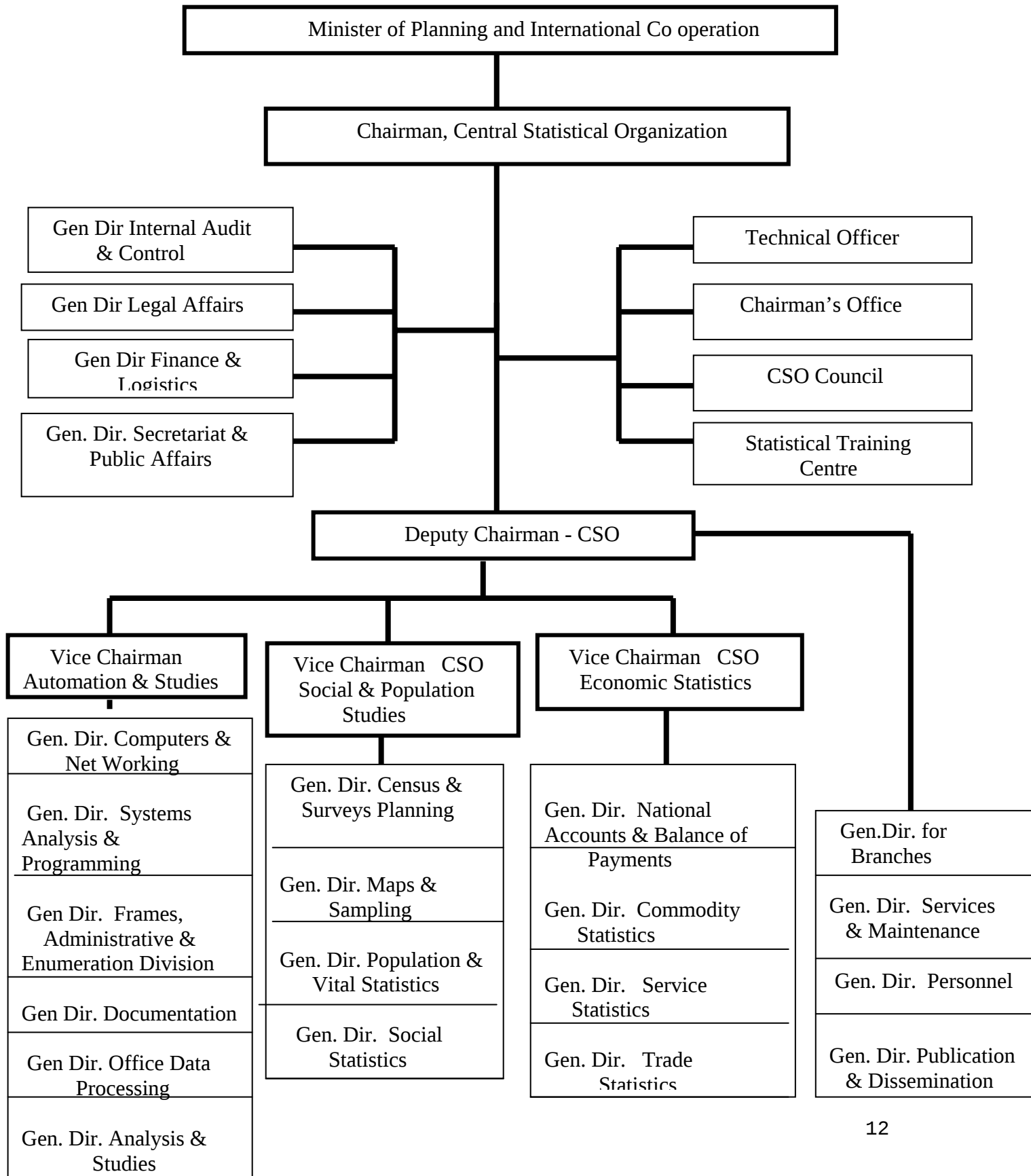
The document³ then goes on to spell, in great detail, the powers and responsibilities of the Chairman, the Deputy Chairman and the various Assistant Deputy Chairmen and the CSO Council and its composition.⁴ The organizational structure, as approved by Presidential Decree No. (233), is as follows:

³ Annex (III)

⁴ A rough translation of the document is reproduced in Annex II.

Organizational Chart of the Central Statistical Organization

(As approved by the Government of the Republic of Yemen in 2003)



The concluding chapter of the decree goes on to state:

“The CSO is the only government institution responsible for the collecting, processing, disseminating and publishing statistical data. The CSO will give published figures the official status, after approving such figures and approving the processes of data collection using field surveys or by obtaining data from government institutions, or private legal entities, who are obliged by law to answer the CSO data requests”.

The decree also empowers the CSO Chairman to, from an organizational point of view, “... issue decrees to combine sub directorates with one another, or establish new ones, in light of the administrative control guidelines”.

The organizational structure approved by the President went through several stages of discussion, both within CSO, the legal department and the Government hierarchy. It would appear that what was put forward to the Cabinet and President was significantly changed by these approving bodies. The structure approved for implementation on the 1st of November 2003, has the clear imprint of the Cabinet Committee and its own views on the matter.

The powers given to CSO over statistical units in other Ministries and Departments in Government and the Chairman's powers to merge or divide possible functions within CSO are important factors to consider in the formulation of the SMP for Yemen and the CSO's abilities to implement such an extensive reform plan that entails complex and sizable activities the CSO will not be able to perform with the current structure and resources.

1.4 CSO's Current Work Programs and Responsibilities

The elaboration of CSO activities presented in this section is based on the functional responsibilities approved in the new organizational structure. As the new structure is still only a few months old, not all of the rationalization and changes have been completed, and changes in staffing are still in the process of being implemented. These must be seen as tentative and subject to change. The new structure takes the following lines of responsibility:

The Chairman assumes direct responsibility for:

- The Technical Office.
- The Statistical Training Centre.
- The Chairman's Office.
- The CSO Council.
- The Department of Internal Audit and Control.
- The Dep. of Legal Affairs.
- The Dep. of Finance and Logistics.
- The Dep. of the Secretariat and Public Affairs.
- The Dep. of Technical Cooperation.

The Technical Office:

The technical office consists of technical units that perform the following tasks:

1. Integrate the work plans prepared by the different sectors of the CSO, and by the CSO regional offices (branch offices), and formulate such plans into a comprehensive plan for approval by the CSO council.
2. Follow up with the governorate offices and the different sectors to prepare implementation programs for their respective plans.
3. Follow up and evaluate the implementation process of the above plans, and inform the leadership of the CSO.
4. Participate in the preparation of the CSO's Investment Budget, in coordination with other related sectors of the government.
5. Prepare monthly, quarterly, and annual reports on the CSO's activities, and make related recommendations.
6. Study the technical aspects of the results of CSO's activities, and make recommendations to the CSO's chairman, accordingly.
7. Follow up of the recommendations forwarded by the different sectors of the CSO, study, evaluate, and approve, or provide alternatives of such recommendations, based on documentation and evaluation results.
8. Participate with the other sectors of the CSO in devising plans to improve and develop the statistical practices so as to better serve the purposes of social and economic development.
9. Prepare recommendations, in coordination with the other sectors of the CSO, for the development of the statistical practice.
10. Study the social and economic phenomena, based on the available statistical data, evaluate such phenomena, and provide recommendations.
11. Technically evaluate and revise statistical research papers.
12. Study the technical aspects of the data-processing sector activities, and provide recommendations to the CSO's administration.
13. Perform any other duties delegated by the CSO administration.

The Statistical Training Center:

The statistical Training Center aims at the development of knowledge and the capacity building of the CSO staff through the organization of training courses and seminars on the theoretical and practical aspects of the statistical practice. The training program is translated into a set of training activities that fulfill the immediate and long term needs of the CSO, by conducting the following tasks:

1. Build a general methodology for training that indicates its activities, means, and tools.
2. Devise the implementation activities of the program in light of the general training plan approved by the administration of the CSO.
3. Conduct the training activities approved through the general training plan.
4. Train and recruit a local training team to perform the training tasks.
5. Coordinate with the Arab, regional, and local bodies to exchange expertise in the fields of statistics, administration, and information technology.
6. Update the know-how of the staff through the provision of the latest materials and providing training courses for the staff in the main office, the governorate offices, and the statistical units in other government agencies.

7. Coordinate local and regional workshops and seminars on statistics (plus marketing seminars to announce the results of surveys and other activities), and provide reporting about such activities.
8. Answer the requests of the various government agencies by coordinating training courses to their needs, and evaluate such training sessions.
9. Prepare evaluation schemes and evaluation forms for its training activities, and determine the standards for evaluation.
10. Monitor field activities, in order to evaluate the field staff performance and the effectiveness of their training.

The Chairman's Office:

The responsibilities of the chairman's office are as follows:

1. Study, analyze, and summarize the chairman's incoming mail.
2. Acquire and make available the data and other information related to the chairman's incoming mail, and perform secretarial work as delegated by the chairman.
3. Forward instructions and decisions of the chairman to the deputy chairman, the assistant deputies, and the directors of the governorate offices.
4. Perform follow-up tasks of the instructions and decisions, and report to the chairman on the level of compliance.
5. Arrange the chairman's meetings, keep the chairman's meeting schedule, remind the chairman of his scheduled activities, and make preparations for such activities.
6. Improve the administrative and technical means and processes.
7. Prepare monthly, quarterly, and annual reports on the performance levels.
8. Acquire and make available all stationery and office supplies needed for the chairman's office to perform all its tasks and follow up activities.
9. Monitor the chairman's office staff, supervise them, and delegate responsibilities and tasks to them.
10. Perform an annual evaluation of the chairman's office performance.
11. Perform any other tasks delegated by the chairman.

The CSO Council:

1. The CSO council is formed by a decree of the CSO chairman, as follows:

a. The CSO Chairman	Chairman of the Council
b. The CSO Deputy	Deputy of the Council
c. The Assistant Deputies	members of the Council
d. The Director of the Statistical Training Center	member of the Council
e. The Director of the Technical Office	member of the Council
f. The General Directors at the CSO	members of the Council

The tasks and responsibilities of the CSO council are limited to providing recommendations to the chairman of the CSO on the tasks and activities outlined by the law, as follows:

1. The annual work plan of the CSO.
2. The evaluation of the annual work plan and the statistical activities.
3. The annual financial, human resources, and training plans.

4. Performance evaluation reports.
5. Drafts of the laws and internal charters outlining the activities of the CSO.
6. Other issues to be presented to the Minister of Planning and International Cooperation, which the CSO Chairman or the Minister of Planning decide the need for the CSO Council's opinion.

The General Department of Internal Audit and Control:

The tasks and responsibilities of the Department of Internal Audit and Control can be outlined as follows:

1st: on the Budgeting Level:

1. Auditing the preliminary budget of the CSO, before approval, to insure its accuracy, and consistency with:
 - a. The government's Development Plan, and the general rules and guidelines for the preparation of preliminary budgets.
 - b. Evaluate of the financial performance and abiding by the pre-set budget, and report accordingly.
2. Review the released funding from the Ministry of Finance, check against preliminary budget, calculate withheld funds, and evaluate the effect of such fund withholding on the planned activities.
3. Follow up with the related parties to provide time-plans, the implementation plans, and the logistics plans for the carrying-out of the phase/phases of activities in question (field/in-house), evaluate the performance and compliance with the general plan of the CSO, and report accordingly.

2nd: On Budget Compliance:

1. Establish record-books to monitor budget compliance for each activity the CSO carries out.
2. Establish record-books for the staff salaries and other compensation items.
3. Establish record books on maintenance activities of equipment, machinery, and vehicles.
4. Audit the compensation and wage-payment lists, the bonuses, and the cuts, which are included in Chapter One: Salaries, Wages, and the like, according to Unit 12, Section 12 of the Finance Law's Charter.
5. Audit the compensation and wage-payment lists, the bonuses, and the cuts, which are included in the project-spending budgets (such as the censuses and sample surveys), and match the spending to the actual activities, using field reports and other supporting documents, according to finance regulations.
6. Follow-up with the Finance Department to list those who have not collected their payments by the 10th day of the following month, matching their data to that in the payment lists, and forwarding such funds into the corresponding accounts.

7. Review the documents attached to the payment orders and settlement orders, to make sure of their correspondence to the standard classification of the preliminary budget.
8. Audit requests for advances of compensation from the current budget or from the current surveys' accounts, to make sure of the legitimacy of the requests and the availability of funds, based on the allocated amounts of the budget and on the actual implementation plan of each project, and to make the corresponding recommendations.
9. Follow up to clear all temporary credit amounts paid out to cover field emergencies, and audit all related accounting transactions and documents provided by team leaders and supervisors. Prepare periodical reports accordingly, and state opinion on degree of compliance with financial regulations.
10. Review secondary budgeting sheets on the project level and the governorate level, and follow up the implementation, after approval.
11. Audit revenue accounting, to insure collection and forwarding to the appropriate accounts at the CBY, and keep record of related transactions.
12. Prepare the Financial and Administrative Charters for all survey and census projects.
13. Train the staff affiliated with such projects on the use of financial forms, i. e. supervisors, assistant supervisors, and team leaders.

3rd: On Current Accounting (Daily, Monthly, Closing):

1. Check and Audit daily records to insure accuracy and the appropriateness of individual records, according to the financial rules, and according to the standards of accounting.
2. Audit Review Balances, and monthly accounts documentation, to insure the accuracy of the record-taking process (revenues/ expenditures) during the period in question, to insure that all comply with the financial charter and the best-practice accounting procedures, and to insure that no transactions appear in the records and not in the account sheets, and vice versa.
3. Audit balance sheets for bank accounts, and monthly bank statements to insure its completeness, accuracy, and approval by authorized staff, keep copies of such statements, and start a record-book with the General Department of Auditing to register all outgoing deposits and cheques that did not appear on the bank statements.
4. Follow up on the preparation of monthly balance sheets and period balance (forms 57 & 58), and forward such documents to the Ministry of Finance and to the Central Monitoring and Auditing Organization, on a timely basis.
5. Follow up on the daily movement of the in-house cash safe to insure record keeping of all cash transactions, make irregular, periodical, and annual inventories, and prepare written reports accordingly, abiding by standard procedures and best-practice norms.
6. Follow up with the Financial Department to insure timely account-closing of all accounts, audit such accounts against financial charters

and rules to insure their completeness and accuracy, and investigate causes of possible excess in expenditures, shortage in revenues, and savings, if applicable.

4th: On Acquisitions and Storage:

1. Follow up with related entities to prepare their commodity budgets, and review such budgets to insure their appropriateness and conformance with the General Budget. Follow up with bid preparation, bid analysis, and bid awarding, and contracting procedures to insure the conformance of such procedures with the rules spelled out by Law No. (3) for the year 1990, and its executive charter.
2. Follow up with contractors to insure the delivery of contracted commodities and the payment of related amounts, as appropriated by the budget and bound by signed contracts, abiding by the Bidding and Bargaining Law.
3. Conduct irregular inventory checks, as well as regular checks, of all storage locations, and report accordingly.
4. Review and evaluate the fixed capital of the storage and check the documenting cycle of commodity delivery and expenditure, to insure:
 - a. The appropriateness, safety, and security of the storage space for such use.
 - b. The appropriateness and completeness of the document cycle used for commodity delivery and expenditure.
5. Supervise and monitor the seasonal and annual inventory conducted by committees formed for this purpose.

5th: On Administrative Level:

1. Monitor staff compliance, review staff conduct evaluation procedures, and insure application of punishment/reward values.
2. Keep roll records to monitor staff attendance, as provided by the daily attendance sheets, supplemented by daily random checks.
3. Conduct regular checks of the staff files, to insure their completeness and safe-keeping.
4. Check and review the financial settlement procedures of the staff members, the terms of reference for each post, the bonuses and compensations, the staff transferring and lending rules, and the staff training and recruiting rules. Evaluate the standards and procedures used to evaluate staff conduct, according to best-practice norms, and abiding by the Civil Service Law, the Retirement Law, and other related legislation.
5. Conduct general monitoring activities, to insure that all staff, and all departments, are aiming at the achievement of the CSO's preset plans, and the governments genral policies.
6. Insure efficiency of use of the CSO's human and material resources, to beast achieve preset plans and goals.

7. Conduct regular checks to insure the availability of all properties, the completeness of all related documents, and their safety and appropriate storage practices, and review disposal procedures of such properties, when applicable.
8. Insure the appropriateness of the procedures used for document cycling and archiving.
9. Check the data and other information provided to the CSO's leadership by the appropriate specialists and departments, to insure the accuracy and reality of such information, and to enable the CSO's administration to make sound decisions accordingly.
10. Cooperate with the representatives of the Central Monitoring and Auditing Organization and provide them with all documents and records they request to achieve their tasks.
11. Conduct any other tasks delegated by laws that govern the operation of the CSO, and which are binding to all staff.
12. Comply with all directions issued by the Chairman of the CSO, provided that such direction do not contradict the Cabinet Bill No. (217) of 1999.

The above tasks are delegated to the following departments:

- a. The Internal Auditing Dept., and
- b. The Internal Monitoring Dept.

The Gen Dept. of Legal Affairs:

The tasks of this department can be outlined as follows:

1. Participate in the preparation, editing, and review of all contracts, agreements, and protocols related to the CSO, or where the CSO enters as a role player.
2. Represent the CSO before judiciary panels, of all levels, in all administrative, civil, criminal, and retaliatory cases.
3. Represent the CSO before any government mediatory and fatwa committees in any cases that the CSO is part of.
4. Participate in the preparation of legislation drafts related to the CSO's operations.
5. Check the financial and administrative monitoring reports related to the head quarters and the governorate offices, audit such reports, and forward to the Chairman of the CSO.
6. Provide consultancy on the legal matters of the CSO's operation.
7. Interrogate, where appropriate, staff members that fail to abide by acceptable conduct norms or by related laws to a degree unacceptable in normal practice conditions, or those who intentionally fail to carry out direct orders or directions of the Chairman.
8. Investigate and interrogate, where applicable, staff members that intentionally conduct activities that are illegal or prohibited by internal charters, such as:

- a. Release of confidential data or other information that he/she might have access to due to the nature of his/her role at the CSO.
 - b. Acquire, on the intension of personal use or personal keeping, displace, or destroy any formal documents related to the CSO, even if such documents are directly related to his/her work.
 - c. Intentionally appear in a manner that is damaging to his/her post's or to the CSO's reputation, during his work hours, or on the personal level.
- 9. Conduct legal appropriation of the cases in hand, provide the suitable legal description of each case, and carry out each case in the appropriate legal manner.
- 10. Act as the public attorney before internal disciplinary panels.
- 11. Be part of any investigative committees formed by the CSO's Chairman for any reason.
- 12. Document and archive the effective laws and legislation, as well as all reference material, agreements, and protocols related to the CSO activities.
- 13. Form all administrative directives, follow up their issuing and documentation procedures, and forward such directive to the appropriate internal entities.
- 14. Form the orders and directives, of public nature, issued by the CSO's Chairman to all the CSO's staff.
- 15. Be a part of the Bidding Committees, Contracting Committees, and other committees that make financially binding decisions.
- 16. Be part of any CSO's negotiations or mediations of legal nature.
- 17. Monitor the general legal conformance of the CSO's staff and promote the staff's general awareness of legal matters related to their work.

The tasks above are delegated to the following departments:

- A. The Dep. of Public Awareness and Legal Cases.
- B. The Dep. of Investigation.
- C. The Dep. of Documentation and Document Formulation.

The General Dept. of Finance and Logistics:

The tasks and responsibilities of this department are to:

- 1. Prepare the General Annual Budget Project according to the genral practice and the rules governing such activity, and discuss it with related entities.
- 2. Formulate the CSO's Annual General Budget, and the logistics plan, accordingly.
- 3. Manage all financial aspects related to the daily activities of the CSO, and coordinate the operation of the various general departments to

insure the most effective achievement of all planned goals and the most efficient use of resources.

4. Keep track of all CSO's financial transactions, as per the Unified Accounting Code and best practice norms, and prepare monthly balance sheets as well as closing balance sheets.
5. Utilize the Ministry of Finance's record books, forms, and value forms to execute financial transactions.
6. Pay out the monthly wages of the staff, and any other staff compensation, on a timely manner.
7. Use internal auditing system to insure the accuracy and appropriateness of all financial transactions, and updating such system routinely to improve its ability to better monitor the use of public financial resources.
8. Report any embezzlement or fraud cases to the appropriate legal entities.
9. Organize and keep track of all accounts related to staff lending, credit payments, and transferred funds, to insure the proper closing of such accounts on a timely manner.
10. Answer to all queries and requests of the Central Auditing and Monitoring Organization, on a timely manner.
11. Guarantee the supply of all record books, forms, logs, and other logistics needed to execute financial transactions in an orderly fashion.
12. Arrange for the supply of safe-keeping needs for cash, documents, and printed forms of monetary value, and organize the disposal of such material according to the effective financial charters and laws.
13. Arrange for the safe-keeping of outdated financial record books and forms, and for the period stated by the effective charters and laws.
14. Provide related entities with the financial data, routinely.
15. Prepare the seasonal and annual plans for this general department, keep record of all the actual needs of the CSO, arrange for the acquisition of such needs on a timely manner, and set rules for the utilization of such acquisitions.
16. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks will be delegated to the following two departments:

- A. The Dept. of Accounting
- B. The Dept. of Acquisitions and Storage

The General Dept. of the Secretariat and Public Affairs:

The tasks and responsibilities of this department are to:

1. Index all CSO's record-keeping books, and keep a general index.
2. Classify all documents and records according to the effective practices, and insure the proper archiving of such documents.

3. Make arrangements to insure non-disclosure of all classified documents without consent of concerned parties.
4. Record-keeping of all outgoing/incoming correspondence of the CSO.
5. Apply privacy and non-disclosure rules where applicable.
6. Perform secretarial activities, such as typesetting, correspondence and report preparation, paperwork cycling and archiving.
7. Make arrangements for receiving official delegations and guests, arrange accommodations and meetings, prepare related materials, and follow up the preparation of reports on such events.
8. Introduce the CSO, its activities, and its programs, and conduct propaganda campaigns for upcoming censuses and surveys.
9. Make all travel arrangements for the CSO's staff, and follow up the preparation of adequate reports on their missions.
10. Make necessary arrangements for meetings, seminars, workshops, and conferences held at the CSO.
11. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks are delegated to the following two departments:

- A. The Secretariat Dept.
- B. The Public Relation Dept.

The General Dept. of Technical Cooperation:

The tasks and responsibilities of this department are to:

1. Coordinate, within the CSO, the formulation of an annual plan for the donor coverage of the CSO needs that cannot be covered by the government's budget, whether direct financial needs or technical support needs.
2. Coordinate with the donor community, through timely reporting of the CSO's needs and through arranging collective meetings, workshops, and conferences, to avoid duplicate or overlapping coverage of such needs.
3. Search, continuously, for possible support sources, and make effort to raise interest in the CSO's activities amongst the donor community and the potential support entities, through providing them with the CSO's products, and through keeping good business relations and routine correspondence.
4. Arrange the follow up activities to insure the carrying out of all grants and the related activities, and report accordingly to the CSO's leadership and the support providers, to insure the most effective implementation of support activities and to avoid donor effort duplication.
5. Evaluate, on a regular basis, the performance of donor-financed activities, formulate plans to improve such performance, and report accordingly to the CSO's leadership.

6. Maintain strong professional relations between the CSO and statistical entities in the region, to insure the best utilization of their experience and know-how.

The above tasks and responsibilities are delegated to the following three departments:

- A. The Dept. of International Relations and follow up
- B. The Dept. of Internal Coordination
- C. The Dept. of Translation and Documentation.

2nd: The Deputy Chairman:

The Deputy Chairman has in addition to overseeing the 3 Assistant Deputies Chairmen, direct responsibility for the following:

- General Dept. for Branches
- General Dept. for Services and maintenance
- General Dept. for Personnel and
- General Dept. for Publication and Dissemination

The General Department for Branches

The tasks and responsibilities of this department are to:

1. Monitor the general performance of the governorate offices of the CSO.
2. Review the annual budgets and technical plans of the governorate offices, and provide related recommendations to the CSO's leadership.
3. Monitor the implementation of field operations on the governorate level, and report accordingly.
4. Study the administrative and technical difficulties faced by the governorate offices in conducting their roles, and provide recommendations to ease such difficulties to the CSO's leadership.
5. Maintain effective and continuous communication channels with CSO executives on the governorate level.
6. Collect annual and seasonal reports on performance evaluation on the governorate level.
7. Monitor and follow up the performance of statistical units in other government ministries and agencies, on the governorate level.
8. Evaluate the procedures of data flow from source agencies, and make recommendations to improve such flow where applicable.
9. Monitor the logistic needs of the governorate offices, and follow up the provision of such needs, where applicable.
10. Work to improve business relations between the CSO's governorate offices and other related government agencies in governorates, and coordinate activities with all official entities as needed.
11. Participate in the planning process of surveys and other activities, on the governorate level.
12. Follow up the preparation of the Annual Statistical Bulletin on the governorate level.
13. Monitor, and report any significant events or changes affecting the operation of governorate offices.
14. Document and archive the data, bulletins, and survey reports of the governorate offices, to insure later easy access and reference.
15. Receive, and forward, all directives, decisions, requests, and queries made by the CSO's administration, follow up the governorate offices' responses, and forward such responses to the appropriate departments of the headquarters.
16. Maintain contacts with the headquarters of other government agencies, to insure –through them- the cooperation of their governorate offices

with the CSO's governorate offices, as per the Statistics Act No. (23) of 1995.

17. Coordinate with the statistical units of other government agencies, to insure their timely provision of data.
18. Coordinate with the statistical units of other government agencies the participation of their staff in certain CSO's activities and their staff's utilization of training activities provided by the CSO.
19. Conduct routine field rounds to check on the performance of the governorate offices, to get first-hand information on their needs and difficulties, and to provide recommendations on remedies to the CSO's leadership.
20. Coordinate with the Statistical Training Center, to insure the involvement of the staff at the governorate offices in training activities aimed at building their capacities and providing them with basic know how.
21. Coordinate with governorate offices to report participants in all activities to the headquarters, in order to enrich the CSO's database of experienced temporary workers, which is later used to recruit them as need arises.
22. Prepare seasonal and annual performance evaluation reports on the governorate level, which present performance evaluation and plan achievement levels.
23. Participate in the discussion and approval activities of the seasonal and annual budgets on the governorate level.
24. Monitor and follow up all matters related to the administrative, technical, and financial operation of the governorate offices at the headquarters, and inform the governorate offices accordingly.
25. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Branches
- B. The Dept. of Follow up and Evaluation

The General Dept. of Maintenance and Services

The tasks and responsibilities of this department are to:

1. Plan regular maintenance activities of the CSO's properties and equipment.
2. Monitor and organize the movement plan of the CSO's vehicles and the maintenance of such vehicles.
3. Maintain the cleanliness and tidiness of the CSO building.
4. Conduct daily cleaning tasks.
5. Overlook, and maintain all internal and external communication services of the CSO, as well as water and electricity services.
6. Conduct checking tasks of vehicles rented to perform CSO's activities.
7. Arrange staff transportation to/from the CSO.
8. Contract cleaning companies.

9. Monitor and record the CSO's primary needs: such as equipment, vehicles, uniforms, and set guidelines for the use of such equipment.
10. Prepare regular reports on the level of performance.
11. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Services
- B. The Dept of Maintenance

The General Dept. of Personnel

The tasks and responsibilities of this department are to:

1. Devise a general plan for the human resources, based on the CSO's activity and development plan.
2. Specify the training and capacity-building needs of the CSO's headquarters and governorate offices, in cooperation with the statistical units in other government agencies, devise long term and short term training plans, and follow up their implementations.
3. Prepare the annual human resources budget, coordinating with all sectors of the CSO, and discuss such budget with related entities.
4. Perform paper-work tasks related to staff appointment, lending, recruitment, and service termination.
5. Determine staff wages, compensations, bonuses, and promotions, according to the effective regulations.
6. Make proposals and recommendations pertaining to the allocation and appointment of staff in the headquarters and governorate offices, according to needs.
7. Study the annual reports of staff performance evaluation, and apply relevant regulations.
8. Oversee staff-related business, and promote team spirit.
9. Archive and safe-guard personnel files in headquarters and governorate offices.
10. Establish and maintain a database on the CSO's staff in headquarters and governorate offices.
11. Conduct the procedures and paperwork related to the timely payment of the staff wages and other compensations related to the (Chapter One) of the government budget.
12. Establish, and maintain record-keeping for all transactions related to staff compensations from the (Chapter One:Salaries and Wages) of the government budget.
13. Apply administrative disciplinary regulations, according to the civil service laws and charters, and document related actions.
14. Conduct any other tasks related to the staff, and carry out secretarial tasks for the Personnel Committee.
15. Carry out all directives of the Ministry of Civil Service and Administrative Reform and other authorized government agencies, as mandated by the law.
16. Apply the regulations related to administrative reform, staff health and safety, and social security.

17. Prepare regular and annual reports on this general department's activities, level of plan achievement, and performance.
18. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks and responsibilities are delegated to the following three departments:

- A. The Dept. of Personell
- B. The Dept. of Wages and Compensations
- C. The Dept. of Organization and Human Resources

The General Dept. of Publications and Dissemination

The tasks and responsibilities of this department are to:

1. Devise technical proposals for the publication and dessimation of the Statistical Publications at the central level, as well as the level of the governorate.
2. Manage, and monitor the electronic circulation of the statistical products, according to the guidelines set by the CSO administration.
3. Maintain, and regularly update, the CSO's website through the provision of timely data, in cooperation with the concerned departments of the CSO.
4. Continuously develop the CSO website, through the use of the latest technologies in the field of internet and electronic publishing.
5. Promote public awareness and build users confidence in the CSO's products.
6. Maintain the know how, and review the latest developments in the field of internet and electronic publishing.
7. Establish a record-keeping mechanism for the website users, and document technical reports.
8. Arrange for the acquisition of newly issued periodicals, books, and other literature, that have to do with the CSO's activities, review such materials and report accordingly.
9. Devise technical proposals for the connection of the CSO's headquarters with the governorate offices and other entities of interest.
10. Establish connections to exchange statistical, economic, and social literature with other government agencies, Arab and regional statistical offices, and other Arab, regional, and international entities.
11. Develop the marketing policies of the statistical products, aiming at the building of a wide base of users.
12. Devise a system for the publication and distribution of statistical materials (monthly, quarterly, and annual).
13. Translate publications as needed, acquire reference volumes, bulletins, and periodicals related to statistical activities, archive such materials, and arrange for their best utilization.

The above tasks and responsibilities are delegated to the following three departments:

- A. The Dept. of Marketing and Publication
- B. The Dept. of Internet
- C. The Dept. of Translation

3rd: The Assistant Deputy Chairman for Automation and Data Processing:

Overlooks the operation of six General Departments as follows:

- The General Dept. of Computer & Net Working
- The General Dept. of Systems Analysis and Programming
- The General Dept. for Frames and Administrative/Census Divisions
- The General Dept. for Studies, Analysis, and Dissemination
- General Dept. for Office Data Processing
- General Dept. for Documentation

The General Dept. of Computers & Net working

The tasks and responsibilities of this department are to:

1. Check and install new equipment.
2. Devise, and carry out annual maintenance, and protective maintenance plans.
3. Follow developments in the IT maintenance world, and new maintenance equipment.
4. Acquire, maintain, and store a spare-parts inventory that contains regular replacements and fast going parts, and regulate the disposal of such parts.
5. Promote the users' awareness of best-practices used to best maintain the equipment they use.
6. Contribute to the development of the staff's basic know-how in the IT world.
7. Acquire user-support software, and organize the use and safe-keeping of such software.
8. Design, manage, and maintain computer networks.
9. Make technical proposals pertaining to the development of networks, and carry out such proposals.
10. Provide user support for the users of networks and all IT equipment.
11. Conduct network administration tasks, and provide authorization privileges by groups and departments.
12. Devise connection plans between the CSO's headquarters with its governorate offices and other entities of interest, and manage electronic circulation of the CSO's products according to the policies of the CSO's administration.
13. Establish a record-keeping mechanism for the website users, and document technical reports.
14. Conduct back-up, and safe-keeping tasks of the data.
15. Follow developments in the world of networking.

16. Follow developments of the software systems used by the CSO, of virus protection techniques, of network protection and security systems, and of operating systems.
17. Prepare regular and annual reports on this general department's activities, level of plan achievement, and performance.
18. Maintain the CSO's website, and perform regular updating and maintenance tasks of the website.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Operation and Maintenance
- B. The Dept. of Networking

This department, which needs more than ten staff members, is currently working with four. The shortage of staff is apparent, when viewed along with the extensive tasks delegated to them. In addition, the past few years have seen a world-wide excessive demand on highly qualified IT specialists. This fact has caused the more qualified personnel in this field to search for better employment opportunities in the public sector and government agencies that provide better staff benefits. In the near past, six of the CSO's best qualified staff left the CSO for better employment, and five of them now work in the private sector.

Currently, the activities of this department focus on providing support for the users of IT equipment at the CSO, solving problems related to Windows (95/98, 2000, or XP), Microsoft Office, and other basic software. In general, the users' lack of experience and know how has put a heavy burden on this department that many other government agencies were able to overcome simply because their staff is better qualified in this area. The majority of the CSO's users' problems are of the basic level, such as: re-installing a corrupt operating system, replace a mouse or keyboard, replace or format a hard drive, and install a network card. However, solving such problems for the users represents the main activity of this department.

The General Department of Systems Analysis and Programming

The tasks and responsibilities of this department are to:

1. Supervise the design and production of all software programs produced at the CSO, for all censuses and surveys.
2. Supervise the testing and documentation process of such software.
3. Follow the developments in the world of software systems and programs, and report accordingly.
4. Conduct research activities to standardize the CSO's databases.
5. Represent the department in related committees.
6. Devise annual work plans, implement such plans, and follow up the implementation process.
7. Develop technical and administrative conduct means.
8. Prepare and present annual reports on this department's performance, and plan achievement level.
9. Devise an annual training plan for the staff of this department.

10. Specify the needs of support staff, on the level of each department of the CSO.
11. Supervise the staff of this dept., delegate tasks to them, and follow up the implementation.
12. Perform an annual evaluation of the staff performance.

The above tasks and responsibilities are delegated to the following four departments:

- A. The Dept. of Programming
- B. The Dept. of IT
- C. The Dept. of Data Entry
- D. The Dept. of Database Administration

Currently, there are 5 staff members working in this department. This department has developed in-house software programs for such activities as the 1994 census, the Family Health Survey 2003, the Multi-Purpose Household Budget Survey 2005, and numerous other activities. It is not clear why standard off-the-shelf software programs were not utilized for these activities.

The data collected through specialized surveys is being saved by subject matter in the computers of concerned departments. We must stress that a clear policy pertaining to database use and maintenance has been missing for long, and must be adopted.

The General Dept. for Frames and Administrative/Census Divisions

The tasks and responsibilities of this department are to:

1. Make proposals for the design of the master frame of the census and administrative divisions, the general master frame, and the specialized social, service, and other frames.
2. Provide data and other information on the census and administrative divisions for all users inside and outside the CSO, provide basic information on the administrative units, and provide analytical studies of the census and survey data for each unit.
3. Follow developments and changes made to the administrative divisions with the Ministry of Local Administration, provide basic information on the locations of ministries, authorities, and other government institutions, and provide technical support to:
 - a. Study, research, and evaluate the standardization of the various statistical frames.
 - b. Study and research of the various databases related to the above frames, and the currently available databases.
 - c. Participate in the design of software to deal with administrative and census divisions and the basic establishment data.

- d. Participate in the design of the software to analyze, query, and report administrative and census divisions, and the basic establishment frames.
4. Archive, and safe-keep the various statistical frames, including the census and administrative frames.
5. Maintain and regularly update the census frames between censuses.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Administrative Frames and Divisions
- B. The Dept. of Census Frames and Divisions

The General Department for Studies, Analysis, and Dissemination:

The tasks and responsibilities of this department are to:

1. Specify the population problems, based on the census and survey data.
2. Perform analytical studies of the census and survey data to pin down the changes and trends of change of the population size, distribution, and characteristics.
3. Perform studies on fertility, mortality, immigration, and the labor force to pin down the factors affecting such phenomena, and their effects on the population.
4. Study health aspects, and the mortality levels, factors, indicators, and relation to the social, economic, service, and environmental community, in cooperation with other government agencies.
5. Cooperate and coordinate with the specialized research institutions to improve and develop the analytical capacities in the population, demographic, social, and economic fields.
6. Keep contacts with research centers to exchange knowledge.
7. Follow and acquire periodicals and new research papers related to population and demographic issues.
8. Document and archive local and regional studies in the fields of demographic, economic, and social analysis.
9. Monitor and document population, demographic, and economic variables, and report accordingly.
10. Participate in field surveys to collect demographic, population, social, and economic data.
11. Develop business relations with entities of interest.
12. Develop technical and administrative business operation means.
13. Devise annual work plans for this department, and follow up the discussion and approval process of such plans.
14. Devise an annual training plan for the staff of this department.

15. Prepare regular and annual reports on the level of plan achievement for this department.
16. Conduct annual evaluation activities for the staff of this department.
17. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks and responsibilities are delegated to the following three departments:

- A. The Dept. of Population Data Analysis
- B. The Dept. of Demographic Data Analysis
- C. The Dept. of Economic Data Analysis

The General Department of Documentation

The efficient use of IT applications that aid in the archiving and retrieval of information (specific information) and in the dissemination of statistical data and indicators in a timely manner represent a tool for planning, research and analysis, and help policy makers to make sound decisions.

Special goals:

- To build a comprehensive information system (database) for the processing of source data so that it stores data and retrieves specific parts of the data of different forms (source data, documented data) in all economic, population, agricultural, industrial, and environmental fields, according to the scope of statistical coverage through censuses, surveys, studies, and research.
- Cooperate with the regional and international statistical institutions to acquire the needed information to serve the development purposes of Yemen.
- Promote and maintain cooperative relations between the CSO and the Information Centers and Programs on the regional and international levels, and make use of the technical support in the area of information technology and information systems.

The tasks and responsibilities of this department are to:

1. Classify subjective analysis, archive and organize data and data sources and knowledge base, and monitor the data flow, data updating, and data dissemination.
2. Build a comprehensive information system, through the application of the following systems, or some of them:
 - a. Bibliographic Databases.
 - b. Non-bibliographic databases (sectored databases).
3. Set standards and specifications for the choice and design of database systems, based on actual performance and need.

4. Develop the technical framework in the area of information services through cooperation and integration by linking the information system of the CSO with regional and international information networks.
5. Establish a modern library that utilizes the new technologies of the information world and provides its services to the users inside the CSO and elsewhere.
6. Establish and maintain a bibliographic database of the statistical, population, and economic activities.
7. Participate in local and regional seminars and activities pertaining to the developments in the information technology area.
8. Prepare the CSO's annual plans pertaining to the development of the IT services and systems.
9. Set guidelines and regulations of the use and dissemination of information (IT guidelines).
10. Provide training and capacity-building services for the technical staff.

The above tasks and responsibilities are delegated to the following four departments:

- A. The Dept. of planning and Follow-up
- B. The Dept. of Analysis and Technical Processing
- C. The Dept. of Information Systems (Software)
- D. The Dept. of the Library

The role of the library is still under consideration, because of the new structural changes. Despite the fact that there are four specific departments, the number of workers is still less than that specified by the internal charters. In addition, there is not a clear cut division of responsibilities, although the structural chart shows such division.

The General Department of Documentation is also responsible for the design and implementation of documentation systems for the surveys conducted by the CSO and other government agencies, in addition to documenting the data published locally and on the international level. The documentation systems above are expected to fulfill the needs of the government users and researchers, and to enable them to retrieve data on any subject by simply typing in the title or descriptive key words on the subject.

The General Dept. of Documentations has ambitious plans for the future. We aim at the building of a documentation system that matches the standards of the UNESCO and that is compatible with similar systems. To achieve that, this department needs support in the capacity building of its staff and in acquiring and using the technical know-how and expertise of international consultants in this field.

To cap, we must stress that despite the clear shortcomings, this department has been able to serve many of the users of the CSO's data products.

General Department of Office Data Processing

The tasks and responsibilities of this department are to:

1. Prepare work plans for the office data processing of the census and other statistical surveys.
2. Design the output tables of the census and survey data.
3. Devise the instruction manuals for the manual revision and coding processes of the census and survey data.
4. Devise the mechanism for manual and automated editing of the census and survey data.
5. Devise the definitions, classifications, and coding lists of all statistical activities, and write up the working manuals and guide in consistency with the local needs and the Arab and international standards.
6. Follow the international developments in the tools, procedures, and means used for data processing, to improve the data processing practices.
7. Participate in the supervision of the data entry process for all censuses and surveys.
8. Participate in the training of the temporary staff used for data processing.
9. Participate in the design of the work plan for the circulation of documents during the various data processing stages (review, coding, editing, entry), through the integration of a document circulation system that regulates the flow of documents.
10. Monitor and supervise the implementation of the Unified Statistical System on the governorate level and the level of the statistical units in other government agencies.
11. Follow up the development of the statistical system through evaluating the implementation levels at source entities.
12. Follow the international developments in the tools, procedures, and means used for the production of statistical indicators and the conduction of statistical studies.
13. Prepare regular and annual reports on the plan achievement levels at this dept.
14. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Documentation
- B. The Dept. of Coordination and Processing

4th: The Assistant Deputy Chairman for Social and Population Studies oversees 4 departments:

- The General Department of Census & Survey Planning.
- The General Department of Maps and Sampling
- The General Department of Population & Vital Statistics and
- The General Department of Social Statistics

The General Department of Census and Survey Planning:

The tasks and responsibilities of this department are to:

1. Prepare the goals, plans, timetables, questionnaires, forms, and manuals.
2. Determine the financial and human resources needed for the implementation of surveys and censuses.
3. Prepare draft budgets of surveys and censuses.
4. Participate in the preparation of the training and distribution plans of the temporary staff to be recruited for surveys and censuses.
5. Follow-up and evaluate field performance, according to regulations.
6. Evaluate questionnaires, forms, quality control procedures, and comprehension and response measuring procedures.
7. Study and discuss sector plans and programs, and forward such plans for administrative approval.
8. Study draft plans, programs, and methodologies of surveys and field studies to be conducted by other entities, and follow up the approval procedures of such drafts.
9. Provide technical support to other institutions carrying out statistical activities, as resources permit.
10. Follow the international developments in the statistical tools, procedures, and means, utilize such developments, and forward them to other interested parties.
11. Prepare questionnaire data requested by local and international entities, fill out such questionnaires, and send them out in a timely manner.
12. Follow-up, prepare, and publish the Annual Statistical Series.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Field Operations
- B. The Dept. of Statistical Programs and Evaluation

The General Department of Maps and Sampling

The tasks and responsibilities of this department are to:

1. Design and prepare the general methodology for statistical samples, determine sample sizes for all sample surveys conducted by the CSO or others, and draw the samples according to design.
2. Evaluate the sample frames used for sample drawing for comprehensiveness and accuracy, and determine weighing factors and enlargement factors for all samples used.
3. Technically evaluate the implementation of sample designs, measure variations, deviations, and levels of comprehension and response.
4. Produce census and statistical maps, classify such maps, and archive them for use for census and survey purposes.
5. Continue activities for the development of the GIS system, in coordination with other related government agencies.
6. Build a Master GIS Database to be used for statistical purposes.
7. Produce statistical maps of all types to fulfill the needs of the CSO, other government agencies, and researchers.
8. Participate in all statistical workshops and seminars related to this department's activities.
9. Supervise the development of sampling frames, maps, and sketches needed for field operations.
10. Participate in the supervision and monitoring activities of census and survey field operations.
11. Participate in the training activities of temporary staff of censuses and surveys.
12. Supervise the map-updating and frame-updating field activities.
13. Document and archive maps and frames in a way that provides easy reference in the future.
14. Follow the developments in the field of sampling.
15. Safe-guard and maintain all tools, equipment, and technical means of this department, and continuously modernize such tools.

The above tasks and responsibilities are delegated to the following two departments:

- A. The Dept. of Cartography
- B. The Dept. of Sampling

The General Director of Maps and Sampling performs direct supervision on four activities as follows:

- A. The production of urban maps
- B. The production of rural maps
- C. The production of establishment frames and administrative entities.
- D. The design of samples

The total number of staff in this department is 9. The Dept. of Cartography produces urban and rural maps for all enumeration areas, including location coordinates and other geographic variables.

The CSO provides maps for use in surveys and field studies for all government agencies, as requested.

The Establishment Frames and Administrative Entities Section produces, as the name entails, listings of settlements down to the sub-village level, as well as listings of establishments such as schools, health facilities, factories, ...etc. The continuously changing village and sub-village names pose a real difficulty in updating the settlement listings. Similarly, the establishment listings are continuously changing because of business closing, business establishing, and business-line changing activities.

The Dept. of sampling has four qualified staff members. The master sampling frame in use is the 1994 Census frame, which has been updated using the data from the 2003 AgriCensus and from other current surveys carried out regularly.

Projection are normally made on the governorate level, and on the district level for poverty applications. We were not able to determine if any studies were carried out to insure that the sample sizes used are sufficient to produce decent estimates on the governorate or district levels. Such practice is the simplest way to measure the reliability of output, however, its vitality becomes apparent only in the event of inconsistency between the results of different surveys.

There is not a geographically-based master frame. The latest AgriCensus 2003 was conducted on the household level, and the estimates were also produced on the household level.

The General Department of Population & Vital Statistics

The tasks and responsibilities of this department are to:

1. Build a reference volume of definitions and methodologies related to the various population and vital statistics, suiting the needs of human development of Yemen, and following the standards adopted by regional and international entities, and update such volume on a regular basis to accommodate methodology changes and alterations.
2. Participate in the planning, preparation, and implementation of population and vital statistical activities, such as censuses and sample surveys.
3. Prepare technical documents, training programs, field operations, and data processing activities of population and vital data, through effective

- coordination with other departments responsible for the planning of censuses and surveys.
4. Prepare the preliminary report drafts, and the final drafts on the population and vital statistical activities.
 5. Study the current status of the population and vital data and indicators and determine shortcomings that can be overcome through specialized surveys, to insure the acquisition of up-to-date data that can be used to produce indicators and measure trends of population and vital variables.
 6. Prepare preliminary studies of surveys and field activities, including methodologies of population and demographic changes, and population projections, to fulfill the planning and decision-making needs of the government.
 7. Coordinate with other research entities regarding the implementation of surveys and specialized studies, to insure the use of suitable methodologies, in cooperation with departments of other sectors.
 8. Prepare methodologies for population and vital surveys to monitor changes of population growth variable and to measure the trends of such variables, including fertility, mortality, and immigration.
 9. Devise a list of indicators pertaining to human development measurement, a list of indicators of the MDGs, and other indicator lists, discuss such lists with related government agencies (such as the Ministry of Planning, the Ministry of Health, the Ministry of Education, ...etc), and acquire the approvals for the proposed lists from authorized agencies.
 10. Update the population indicators in the population and demographic indicators database, within the CSO's main database of indicators.
 11. Participate effectively in the methodology design, planning, and carrying out of population surveys aimed at measuring the human development variables, such as health surveys and labor force surveys, in cooperation with related departments of the CSO.
 12. Participate in the planning and supervision of the data collection, data processing, and data tabulation phases of population data.
 13. Evaluate the data related to population and vital issues, through the preparation of a time series for such indicators that can be used monitor and evaluate the development plans related to population issues.
 14. Provide, in cooperation with other related departments, all data requested by other government agencies, by non-government organizations, and by regional and international entities.
 15. Participate in the statistical capacity building of statistical units in other government agencies, and other related entities, through training and design of data collection forms.
 16. Build the capacities of the CSO staff (Headquarters and gov. offices) and of the staff of statistical units in other gov. agencies in the field of population and vital studies, through cooperation with other CSO departments.
 17. Build strong affiliations with all entities concerned with population statistical research and all entities that finance or specialize in

- population issues and human development, to insure mutual benefit and know-how exchange between the CSO and such entities.
18. Publish statistical bulletins and reports that present new output in the area of population and vital statistics.
 19. Prepare the sections of the Statistical Yearbook pertaining to population statistics.

The above tasks and responsibilities are delegated to the following three departments:

- A. The Dept. of Population Statistics
- B. The Dept. of Vital and Health Statistics
- C. The Dept. of Population Studies

The Labor Force Statistics Section produces the population projections. In addition to conducting analytical studies of the data of the Labor Force demand Survey, although this section does not directly participate in carrying out the survey.

The Vital Statistics Section is responsible for the implementation of health surveys. However the Demographic Family Health Survey 2003 was carried out by the Ministry of Health and Population, under direct supervision of the CSO of field operations. This section also performs analytical tasks on the fertility, mortality, and sickness ratio indicators, using sample survey data.

The new-born and deceased registration is the responsibility of the Civil Register's Authority. The estimated rate of new-born registration is 60% in urban areas, going down to 10% in rural areas of the country. This data, regardless of its low coverage, is analyzed at the CSO, according to the listings provided by the CRA.

As for mortality registration, it is even less comprehensive, because only hospital cases are registered, and even these can be incomplete. Despite the fact that the law requires that citizens register their new-born and deceased cases, the part on death registration was barely enforced.

The Indicators Section calculates the indicators depending on the indicators database, and updates them on a regular basis. This section also check the data for consistency, to improve the data and raise reliability. This section was also responsible for devising the population policies of Yemen until the National Population Council was established in the nineties and took this responsibility.

The General Department of Social Statistics

The tasks and responsibilities of this department are to:

1. Devise periodical plan for the implementation of activities related to social statistics, and evaluate the performance level of conduction.
2. Design the statistical forms and the guiding manuals related to periodical social data collection.
3. Design statistical forms and operation manuals for the collection of basic data sets (census data and sample survey data) in field related to social statistics, in cooperation with the related department.
4. Participate in the design of frames and statistical output tables and reports for all social statistics activities, and update such products regularly in light of local and international developments in this field, in cooperation with the Sector of Data Processing and Studies.
5. Devise, and update statistical definitions and terminology used in the social statistics area, making use of the experience of more statistically developed countries and regional organizations.
6. Collect current social statistics on a regular basis from primary and secondary sources.
7. Participate in the design and updating process of manuals and classifications of social statistics regularly, in light of the continuous evaluation of current statistical activities and the experience of other countries and organizations.
8. Establish open communication channels to monitor the activities of statistical units or other government agencies related to social statistics, and to support such units in developing their practice.
9. Publish statistical periodicals (Bulletins, reports) that present the output of all social statistics activities.

The above tasks and responsibilities are delegated to the following three departments:

- D. The Dept. of Social Statistics
- E. The Dept. of Sex and Gender
- F. The Dept. of Poverty Statistics

5th: The Assistant Deputy Chairman of Economic Statistics covers 4 departments:

- The General Department of National Accounts and Balance of Payments
- The General Department of Commodity statistics
- The General Department of Service Statistics and
- The General Department of Trade Statistics

The General Department of National Accounts and Balance of Payments

The tasks and responsibilities of this department are to:

1. Prepare the preliminary and final estimates for the National Accounts and their distribution, and devise the Commodity Balances and Financial Flow, in light of the detailed sector data collected from various sources, and in cooperation with other departments of the CSO.
2. Prepare the source and use accounts, estimate the capital structure, and estimate the government and private spending, in cooperation with other departments of the CSO.
3. Make the Added Value Estimates, net and total, by sector, and the distribution of added value between wages and salaries and between total and net profits of the public, private, and mixed sectors.
4. Prepare the annual estimates of the Gross National Product from the various sources, and the estimates of the portion of it consumed by government spending, by private spending, and on the capital investment and inventory change.
5. Design forms and systems for the National Accounts statistics, and monitor their implementation at related agencies.
6. Collect, classify, and analyze detailed statistical data on the monetary sector, the insurance sector, the current accounts, and the capital account of the government's budget (revenue, expenditures, monetary statistics, banks) and other financial statistics that serve the purposes of development.
7. Coordinate with the various source agencies for the preparation of production accounts, the Gross National Product, and other agencies responsible for economic, finance, monetary aspects, foreign trade, the balance of payments, and others.
8. Prepare and publish the statistical periodicals, and follow new developments in the field of National Accounts and Financial statistics on the local and international levels.
9. Devise the commodity balances, and financial flow.
10. Devise the indices for the economic sectors.

11. review, document, tabulate, classify, and present the output of sector statistics as per the needs of the National Accounts production.
12. Determine the human resources needs of this department, and reflect such needs in the annual budget of the CSO.

The above tasks and responsibilities are delegated to the following four departments:

- G. The Dept. of economic Statistics
- H. The Dept. of Financial and Monetary Accounts
- I. The Dept. of Commodity Accounts
- J. The Dept. of Service Accounts

The activities have been assigned to several sectors, according to the recommendations of the IMF's consultant that has been working with the CSO for a considerable period of time, as follows:

- a. The agriculture, forestry, and hunting sector
- b. The mining and quarrying industries sector
- c. The production industries sector
- d. The Electricity, water, and gas sector
- e. The building and construction sector
- f. The wholesale trade, retail trade, restaurants, hotels, and maintenance sector.
- g. The transportation, storage, and telecommunication sector.
- h. The Finance, insurance, real estate, and business services sector
- i. The personal and social services sector

The national accounts have been formulated until 2003 based on the Materials Production System. Using the technical support provided by the IMF and the ESCWA, this sector moved towards the production of the National Accounts using the 1993 System of National Accounts (SNA 1993). The support from the IMF continues through consultancy visits on national accounts on a quarterly basis, to follow developments, develop procedures, and provide technical assistance.

Despite the significant improvements achieved in the National Accounts production process, the lack of data hinders more developments. Efforts should be directed towards the production of needed data sets that represent the critical factor of national accounts development in the upcoming period.

The General Department of Commodity statistics

The tasks and responsibilities of this department are to:

1. Suggest the statistical frameworks related to the commodity production and environment sectors, make regular updates of such frameworks, and coordinate with related departments in other government agencies.
2. Design statistical forms and systems and develop such forms and systems with regards to the statistics of the production sectors and the

environment, and follow up the implementation process at the related departments of other government agencies to serve the purpose of National Accounts formulation.

3. Collect statistical data from primary and secondary sources (direct and indirect) on production, agriculture, fishery, mining, energy, construction, electricity, water, and the environment.
4. Review, audit, classify, tabulate, and present the sector output information forwarded to this department from sources, after evaluating, comparing, and studying the comprehensiveness of such data, according to normal statistical practices.
5. Calculate the various sector indicators related to the sectors of production, raw materials, added value, labor, wages, production cost, producers prices, and others.
6. Study the produced figures in the sectors of production and environment, monitor changes and explain such changes, tabulate and publish tables, prepare studies and reports on a regular basis. This department also conducts all correspondence related to its activities on the local and international levels.
7. Prepare draft plans for statistical activities (short and long term) related to its scope of work.
8. Prepare and publish the statistical periodicals, and follow new developments in the field of production and environment statistics on the local and international levels, and implement such activities whenever possible.
9. Make suggestions and recommendations regarding the carrying out of censuses and surveys in the economic sector, including their goals, and participate with the department responsible for census and survey planning in the planning, implementation, and processing of the data, the evaluation, and the timely publication of output, and develop data sources as resources permit.
10. Coordinate and supervise the activities of the statistical units in other government and non-government agencies pertaining to economic statistics, to insure the implementation of the Unified Statistical System, to guarantee the data flow according to schedule, to raise the accuracy and comprehensiveness levels, and to insure the standardization of definitions, classification systems, and manuals throughout such units and the CSO.
11. Perform any other activities needed because of the nature of its operation, mandated by the law, or delegated by the CSO's Chairman, including the provision of data and filling out of questionnaires requested by local and international organizations on a timely manner.
12. Perform sample commodity surveys to monitor changes, and to collect data that cannot be collected through current statistical surveys.

The above tasks and responsibilities are delegated to the following four departments:

- A. The Dept. of Agricultural and Fishery Statistics
- B. The Dept. of Industrial and Energy Statistics
- C. The Dept. of Environmental Statistics

D. The Dept. of building and Construction Statistics

This department is the largest in the CSO. It is responsible for the trade and investment establishment statistics. The number of staff is 18 members, distributed amongst the four sections above.

The industrial sector includes industrial production, mining, electricity and water production, and oil production. The industrial production and construction data is collected through the large, middle, and small establishment survey. The data on the production of electric power, water and oil, is – on the other hand - provided by the related ministries.

The largest survey of investment establishments was conducted in 1997. Since then, an annual survey to update the data. The establishment listing of the 1994 census represents the Master Frame, which is updated on a regular basis through current sample surveys conducted by the CSO and other entities. Another data updating source is the records of the General Investment Authority, which is the government agency responsible for issuing licenses for new investment projects. There are also plans to improve the comprehensiveness of the establishment listing through acquiring establishment data from the local authorities.

A comprehensive establishment listing was conducted as part of the General Population, Housing, and Establishment Census 2004. This listing is expected to provide establishment data of the same magnitude provided by the 1997 survey of investment establishments.

The field activities are usually carried out on the governorate level, to produce output on production, labor, capital investment, salaries and wages, and other aspects.

Due to time limitation of the mission, we were not able to find out about the actual number of establishments covered through field surveys, but the current listing apparently covers several thousand establishments. Considering the importance of official statistics and investment statistics, we conclude that this sector is the weakest of the CSO sectors.

Little effort was paid to cooperate with the Union of Chambers of Commerce and to acquire the list of member establishments, considering the fact that the UCC has an annual member registration system. There is confidence of the ability to cover the majority of the establishments, especially if we know that 10% of the establishments take up about 90% of the production and labor activity of the production sector. The idea is built of designing a sample survey using the membership records of the UCC as the sampling frame. This will enable the collection of more comprehensive establishment data at a lower cost.

The data on the agriculture, livestock, and fishery sector is acquired through secondary sources, with the Ministry of Agriculture as the most important. In

addition, the data from the 2003 AgriCensus, which currently being processed, will supplement a country wide, comprehensive database. Further, the Ministry of Agriculture and the Ministry of Fish Wealth conduct regular surveys of the agricultural and fishery production. We believe that there are shortcomings in the surveys of this area, because data collection is focused on the subject-matter aspects, rather than quantitative aspects. This fact indicates that the economic statistics sector has provided technical support in this area to the Ministry of Agriculture and the Ministry of Fish Wealth.

The fishery data comes from the ministry of Fish Wealth. The CSO will benefit from the support provided by the European Commission for the purpose of developing the fishery statistics, through conducting a household survey of the fishing communities. The survey data will be supplemented by a survey of the fishing centers. The same idea will be implemented on livestock data.

The data collection activities of building and construction sector started about three years ago. Annual surveys of this sector were conducted since 2001. The first step to build a listing frame for the building and construction establishments was the acquisition of the establishment listing from the Ministry of Public Works and roads. The listing of 2003 contained about 1000 establishments, and has been supplemented by the listing of establishments from the 1994 census.

A sample of 6000 buildings was designed from the Master Frame of about 60000 buildings. This sample was used to conduct a governorate level survey, and an annual survey is carried out.

Finally, the environment statistics section is not yet fully operational till this moment. We hope that arrangements be made to acquire environment data from secondary sources to draw a complete picture of the environmental issues.

The General Department of Service Statistics

The tasks and responsibilities of this department are to:

1. Prepare periodical plans to carry out activities related to service statistics, and evaluate performance on a regular basis.
2. Design, evaluate and update statistical systems pertaining to the collection of service statistics on a regular basis (including transportation data and personal and business services data).
3. Devise and regularly update the statistical definitions and terminology used in the service statistics area using the experience of more statistically developed countries.
4. Collect statistical data related to the movement of goods between local production centers, local consumption centers, and export centers,

imported goods movement between sea/land/air ports, land entry centers, and land consumption centers. Further, this department collects passenger transport data between cities, villages, and within, and the estimates of activity size, revenues from transport margins, and the expenditures on production materials and wages.

5. Collect statistical data on the telecommunication and post activities, and estimate the activity size, the annual revenues, the labor, the wages, and the operational surplus.
6. Collect statistical data on the movement of air/land/sea transport of goods and passengers, and the storage activities, and estimate the activity size and the revenues and added value, distributed between wages and operational surplus.
7. Conduct a listing operation of all establishments to monitor changes in the service activities and to gather data that cannot be acquired from current surveys.
8. Continuously collect data on services from direct and secondary sources on a regular basis.
9. Conduct sample surveys to monitor activity developments and to gather data that is not provided by current statistical surveys.
10. Prepare annual and periodical reports on the output of all statistical activities covering the services sector.
11. Prepare and publish the statistical periodicals, and follow new developments in the field of service statistics on the local and international levels.

The above tasks and responsibilities are delegated to the following three departments:

- E. The Dept. of Transportation Statistics
- F. The Dept. of Communication and Information Technology Statistics
- G. The Dept. of Personal, Social, and Business Statistics.

The Transportation and Telecommunication Unit has three staff members, while the Other Services Unit four staff members, and most data is gathered from source agencies.

The data collection is performed in sets, such as: travelers, traffic data, accidents, telephone lines, and cars and trucks. In addition, sample surveys, covering the private sector's transport and telecom establishments are conducted, using the 1994 establishment listing as the sampling frame, which is updated regularly through current surveys. The sample survey of the telecom establishments includes the phone companies, the telecom centers, the internet cafes, and other related establishments. The sample frame included 3000 establishments in 2003, and 500 were surveyed, after being classified by establishment size.

The General Department Of Service Statistics also collects data on "Other" services, such as schools, universities, medical labs, restaurants, and hotels. As in the above cases, the establishment listing of the 1994 census is used as

the sampling frame. The detailed data collected includes the number of staff members, the wages, production, direct expenditures, and investment in this sector.

The General Department of Trade Statistics

The tasks and responsibilities of this department are to:

1. Prepare periodical plans to carry out activities related to trade statistics, and evaluate performance on a regular basis.
2. Design, evaluate and update statistical systems pertaining to the collection of trade statistics on a regular basis (including internal and external trade).
3. Collect and classify data on the internal and external trade establishments.
4. Collect statistical data related to foreign trade sector, such as exported/imported goods and transit trade, and classifying such goods according to standard classification systems adopted in the work manuals.
5. Review, audit, classify, and analyze statistical data on foreign trade with regard to origin, quantity, value, prices, purposes of use (middle or final consumption or capital structure), and the nature of goods (primary, half processed raw materials, processed final products).
6. Maintain continuous cooperation links with the Customs Authority and the customs centers, which represent the primary source of import/export data, and with other government agencies concerned foreign trade administration aspects, such as the Ministry of Trade and the Central Bank of Yemen, to acquire the latest foreign trade data.
7. Prepare periodical reports on the evaluation and analysis results and the indicators of the trade sector, in order to improve the trade statistics and to produce statistical figures that truly present the actual stand of this important sector.
8. Publish periodic and annual bulletins of the output of statistical activities covering the trade sector.

The above tasks and responsibilities are delegated to the following five departments:

- A. The Dept. of Foreign Commodity Trade Statistics
- B. The Dept. of Service Trade Statistics
- C. The Dept. of Price Statistics
- D. The Dept. of Internal Trade Statistics
- E. The Dept. of Trade Information

This department has 11 staff members, responsible for the statistics of foreign trade, internal trade, prices, and trade information. The foreign trade section is responsible for the processing of the customs forms that flow in from the various customs centers, covering imports, exports, and re-exports.

The customs centers in the Sana'a City, Aden, Hodiedah, and Hadhramout deliver their data in electronic format (on floppy diskettes). Such data is processed by the responsible department. Other customs centers deliver paper media.

After the current effort to install computerized systems in the customs centers, all 25 centers will be able to deliver their data through the planned network connection, without the need to use diskettes or paper media.

On the other hand, the internal trade section and the price section are responsible for the formulation of the Consumer Price Index CPI. Prices are collected in all the 21 governorates, and processed in this department. The list of prices contains 449 goods and services, whose prices are collected in four marketplaces in the main cities and 2 market places in the secondary cities/towns of each governorate. Based on the collected prices, two monthly bulletins are issued, one for the prices of goods and services, and the other for the consumer price indices, on the governorate and national levels. A new survey covering data on sales, production, and consumption of 800 establishments in the five main cities, is planned for launching in January 2005.

1.5 CSO Staffing and Resources

The CSO has a total staff of 227 at the HQ level. Their formal educational qualifications are as follows:

Types of Qualifications	Number	Percentage
University degrees		
Ph. D.	1	0.4%
Masters	2	0.9%
High Diploma	11	4.8%
B. A./ B. S.		
Statistics	23	10.1 %
Computers	13	5.7%
Economics	23	10.1%
Law	11	4.8%
Business Administration	6	2.6%
Accountancy	12	5.3%
Political Science	6	2.6%
Geography	6	2.6%
Other degrees	16	7%
Diploma After High School	11	4.8%
High School certificate	45	9.8%
Below High School	41	18%
TOTAL	227	100%

In terms of experience, 46% or 104 members of the staff have been working in the CSO for more than 16 years. This is both a strength and a weakness – CSO has a large pool of experience in terms of years but staff is set in their ways, conditioned by past practices. The new intake i.e. those with less than 3 years experience only constitute 3% (20 individuals) and of these 11 joined the CSO in the last few months.

The number of male staff accounted for 82.4% or 183 out of the 222 staff working in the CSO.

Table 2: CSO Staff at HQ by length of service

Number of years of service	Total	Male	Female
0 to 3 years	14((%)	NA	NA
4 to10 years	36(10%)	NA	NA
11 to15 years	68(24%)	NA	NA
16 or more years	104(63%)	NA	NA
TOTAL	222(100%)	183	39

Note: The numbers of staff in not 'stable', seems to change depending on the Source of information

English language proficiency is limited. A few of the General Directors are fluent in English, primarily because they have had training or have been educated overseas in subjects such as Statistics, Economics and Computer Science.

At the Governorate level, as per the information in "Personnel Chart for branch "governorate" offices" of April 2003, there was a total staff of 481, of whom 329 were males and 152 females. In all of the Governorates, there is an overwhelming number of male employees, with the notable exception of the Aden Governorate. In fact 11 of the 21 Governorates have no female staff. The only unusual exception, for reasons unknown, is Aden. Here there are 102 female staff and only 85 male staff.

In terms of qualifications, 30 % or 115 of Governorate staff have University qualifications, 47% or 185 have High School certificates with a further 18% or 69 with Primary education. Most of those with University and High School education work in the Aden Governorate. In terms of numbers, 155 of the 390 staff working at the Governorate level work in Aden.

Staff at Governorates by Qualification							
Qualifications							
Type of Degrees							
Governorate	Post Graduate	University Degree	Post High School	High School	Primary School	No Education	Total
Aden	3	57	20	47	37	13	177
Amran	-	3	1	2	-	-	6
Baydha	-	2	1	2	-	-	5
Dhlea	-	1	4	-	2	-	7
Dhmar	-	5	1	3	1	-	10
Sayoun	-	3	-	7	3	-	13
Hajja	-	3	1	2	1	2	9
Mukalla	-	12	4	18	15	4	53
Hodaieda	-	-	3	4	3	1	11
Ibb	-	3	2	3	1	-	9
Abyan	-	6	1	12	12	4	35
Jawf	-	4	-	1	0	0	5
Lahej	-	5	3	16	4	2	30
Mahara	-	2	-	7	4	1	14
Mahweet	-	1	-	3	1	-	5
Mareb	-	2	1	3	-	-	6
Saadah	-	4	-	2	-	-	6
Sana'a	-	2	-	3	1	-	6
Sana'a City	1	10	1	2	-	2	16
Shabwah	-	1	-	11	18	7	37
Taiz	-	9	2	1	2	2	16
TOTAL offices	4	135	45	149	105	38	474
Total CSO HQ	14	116	11	45	25	16	227

One significant point to note is the sharp difference among Governorates in terms of staff. At one end Aden with **177** staff and Mukalla with **53** staff. In fact 10 of the Governorates have less than **10** staff.

In terms of computing equipment, CSO Head office has a range of PCs from Dell, HP, Philips, and Compaq to Chinese made PCs. The same is true of printers; there is a mix of laser printers, Desk Jet printers, and Dot matrix printers. The CSO according to the information provided has 30 old computers not in use. In total there are 213 PCs and 48 printers. There is some uncertainty about how many are useable and are being used effectively. The fact that there are many PCs not usable but still in stock does reveal something about 'housekeeping' within CSO.

In terms computer net working there is a small system in operation at the training Center. There is also a net work system within CSO, but because the server is small, it has effectively not been functional. There are approximately 100 net work points, but it is believed that all of them are either not working or cannot be used

At the Governorate level, there are 25 old PCs and 7 new PCs and 22 printers. There are many odd aspects in the information provided; for example the Governorate of Mareb has no PC but has a printer. It is highly probable that most of the PCs are only physically available but not in use. The same may be true of printers.

The budget of CSO for 2004 and 2005 is summarized below. Of the total, almost 62.6 % is categorized as "Running Costs" representing regular operating expenditures. The remaining 37.4%, although described as "Capital Costs and Investment" represent outlays on surveys and data collection efforts.

Significantly, almost 83% of the total budget of CSO in the current year is devoted to the censuses of Population, Housing and Establishments. There is clearly a highly skewed distribution of resources. The bulk of the resources available are channeled to what can best be seen as "on/off" activities, leaving only a very small proportion for regular statistical activities that constitute, in normal circumstances, the core work of a statistical office.

Developing a sustainable statistical capacity and pursuing a meaningful work program that is responsive to the needs of the various stakeholders will demand an urgent reexamination of the budget. A realistic budget will need to be developed on the basis of detailed costing of the work program based on the recommendations contained in the SMP. Unless these steps are taken, the multi-million dollar program of external assistance identified in the SMP will have minimal impact in accelerating the flow of data.

CSO BUDGET SUMMARY for the ongoing projects: 2004(Thousands YR)

NO.	Projects Name	Approved budget for Year 2004	Project cost as % of chapter 2 allocation	Project cost as % of total budget
1	CSO Support & Organization	20000	18.3%	5.3%
2	Agricultural Census	7000	6.4%	1.9%
3	Construction Survey	11000	10.1%	2.9%
4	Personal Services Survey	4000	3.7%	1.1%
5	Transportation & Telecom Survey	6000	5.5%	1.9%
6	Price Survey	2000	1.8%	0.5%
7	Industrial Survey	4000	3.7%	1.1%
8	Household Budget Survey	15000	13.7%	4%
9	Foreign Trade Survey	8000	7.3%	2.1%
10	Internal Trade Survey	3000	2.7%	0.8%
11	GDP. Estimates by Gov.	7000	6.4%	1.9%
12	Women participation in economic activity	4329	4%	1.1%
13	The GIS Updating	8000	7.3%	2.1%
14	National Accounts	10000	9.1%	2.6%
	Total	109329	100%	29.3%

1.6 Technical Cooperation

The CSO has been the beneficiary of considerable amounts of technical assistance from a number of international donors. The assistance provided has covered support for particular data collection initiatives, general training and modest amounts of equipment and hardware.

An overview of the assistance received is in order. The 1998 Household Budget Survey was supported by the Japanese government, with funding channeled through the World Bank. The grant provided amounted to US\$400,000.

The 1999 Poverty Survey, as part of the Poverty Reduction Strategy, had financial support from the UNDP. The Demographic and Health Survey (DHS) of 1991/92, 1997 and 2003/04 had varying amounts of financial support from UNDP, the Arab League, USAID, and PAPCHILD (Pan Arab Project for Child Development) which later became PAPFAM (Pan Arab Project for Family Development). A conservative estimate of external funding for all of these surveys is that US\$ 2.5 million was received.

The Agriculture Census of 2003 was funded by the European Commission and was estimated to be in the region of 3.5 million Euros.

The Labor Force Surveys of 1992, 1995 and 2002 had financial support from UNDP, the Government of Yemen and USAID (for the analysis of the 1992 data).

The industrial Census of 199/96 was funded by the German Government through GTZ and helped in getting data through household surveys to build the so called 'Master frame'. Even the 1994 Population Census had significant financial support from UNFPA to a tune of US \$1,050,000.

In addition to specific survey support, CSO has been a beneficiary of institutional support in the form of one major initiative and other smaller initiatives. The Government of the Netherlands mounted a major initiative between 1995 and 2001 in the amount of US\$ 5.5 million. The project financed by the Dutch Government and executed by the Netherlands Economic Institute (NEI) from Rotterdam, started in 1995 and was completed in 2001. Under the project two long term advisers were assigned with the broad objective of improving the capacity of CSO. The project aimed to strengthen CSO via:

- better management of the CSO;
- provide better facilities
- better trained staff and
- improvement in the statistical system.

Even though the 4 goals were stated as discreet objectives, they were in many ways interrelated, one depending on the other for success. The project delivered better facilities and trained staff. The project provided long term advisors/ experts. In addition formal training through work shops and fellowships abroad were made available.

The project helped in building a fully equipped training facility, including the installation of a computer network. This was installed at the beginning of the project and upgraded towards the latter part of the project, because of technological advancements. Special equipment was acquired and made available to CSO for the mapping department, and the equipment is very much in use to this day, especially in relation to the 2004 Population Census.

A full fledged printing facility was installed and staff trained so that CSO will have in-house capability to print its own questionnaires and publications.

The main achievement of the project was in laying the foundation for a national statistical system. It is also claimed that the project put in place a report describing the ' complete system of statistics', which statistics to collect, by whom, definitions, and classifications, methods and intervals of collection etc. This document not only lays down the present and future activities of the CSO but also spells out what contributions are expected from other Ministries, giving them guidance and rules on data collection.

Over the 5 year duration of the project there has been extensive training at both the Head Quarters level and at the Governorate level. On average, 78% of the training was directed at staff at the Head Quarters and the remaining 22% at the branches. Approximately, 1709 staff was trained over the 5 year period- with 154 sent overseas for training.

Of the 1555 internal trainees, 659 were trained on basic and advance use of computers. In addition, virtually every major area of statistics was covered in the training plan. A summary of the training provided is given below.

Training activity in the CSO (1995-1999)

Subject	Internal Training	External Training
Computers (basic)	346	15
Computers (Advance)	263	
National Accounts	30	11
Survey & sampling	919	xxx
Principles of Statistics	96	xxx
Demographic indicators	26	xxx

Price Index	9	xxx
Management	79	7
Developing Mapping	30	xxx
Data Analysis	13	xxx
ENGLISH	120	xxx
Data Analysis	xxx	17
Production & Industrial Statistics	10	xxx

CSO was also one of the beneficiaries of the UNDP/DFID/IMF Technical Assistance program entitled “Strengthening Economic and Financial management” (SEFM) Phase III. The total project funding is GBP 7.9 million, of which DFID contributed the largest part - GBP 4.375 Million, IMF GBP 1.22 Million and UNDP GBP 0.83 Million.

Phase III of SEFM was primarily aimed at a number of agencies such as the Customs, Central Bank of Yemen, Ministry of Finance, Ministries of Health, Education, Public Works and Housing etc. The assistance given to Customs had an indirect effect on the data collection system of CSO by improving the flow of foreign trade data through the adoption of the ASYCUDA system. The CSO will be enabled to receive the new forms of data available from the ASYCUDA system. The SEFM project also aims to provide short term technical advice and training to ensure that CSO and Customs have clear understanding of the appropriate form and structure of trade statistics.

One component of the SEFM project directly focused on assisting CSO. The CSO had made significant progress to ensure consistent data classification under the Dutch project described earlier. SEFM through the provision of an advisor has attempted to build on this by designing a “matrix of Statistical data availability and processing themes”. This initiative essentially collected information on the following:

- if the data conforms with UN requirements;
- Data storage means i.e. if it is Database, Electronic or Manual;
- Data processing methods
- Regularity of updates;
- Methodology used to produce data i.e. If the source is Census, Surveys or Administrative records and
- Producer – User relationship

CSO will also be receiving assistance under SEFM in the area of national accounts. The plan is to assist CSO through a mix of technical assistance, training and provision of a limited amount of equipment. Technical assistance will be on a short term basis in the area of national accounts, including computer processing needs. The end objective is to

develop reliable national accounts based on the 1993 SNA. In addition the plan is to have additional price indices, such as a Producer Price Index, and prices for imports and exports.

1.7 Other component parts of the Statistical System

Some significant amount of data is being collected by line Ministries, and other agencies of the government. Much of the data generated are based on administrative records, e.g. Customs, budget data, and reporting by particular ministry staff at the Governorate and District levels. In the 13 or so years since the unification of Yemen, small statistical units have been established in most Ministries. Almost all of them suffer from inadequate resources, and an inability to keep good trained staff working for long in the various statistical units.

Some line Ministries have had substantial support to start collecting data to meet their specific needs with the help of UN specialized agencies such as FAO, WHO, ILO, UNICEF, UNFPA, UNDP, the World Bank and other bilateral donors such as DFID. In almost all instances where the aim has been to conduct national surveys, the relevant agencies have worked closely with the CSO and in a majority of cases CSO has carried out field work on behalf of the Ministries or departments.

The data gathering efforts of the line Ministries are driven largely by their own needs. The data collection in most cases conforms to accepted norms, concepts and methods, mainly because of the close links to CSO. Where samples are needed to conduct a particular survey, help is sought and given by the CSO.

The Ministry of Health received substantial assistance from WHO. Since 1998 this assistance has been stepped up markedly, given the strong political commitment. WHO recognizes that the Ministry has a weak information system and to this end it has extended support through training. National Prevalence Studies have been carried out using WHO experts. In addition, staff from the University of Yemen and other institutions in the region has helped in some of these studies. A Yemen Family Health Survey was carried out in 2003, with CSO technical support and funding from UNFPA, WHO, the Arab Fund and the Government of Yemen. A sub component of this was to get an inventory of health facilities. The WHO also helps the Ministry to collect qualitative data on reproductive health issues and violence against women.

The key problem faced by Ministries such as Health is a shortage of staff. They have at present one Statistician and 8 staff to deal with statistical issues.

The WHO will in the next 5 year Plan (2004-2009) allocate US\$ 2 million for developing a Health Information System. Sustainability remains an issue because of staff shortages. For example a web site was developed with WHO support, but it is not updated. Similarly the Geographical Information System (GIS) established by the European Commission (EC) has run into difficulties on how to keep it going.

A number of further observations are in order. The various data collection efforts referred to above have been designed for the sole purpose of meeting urgent needs. Capacity building has not featured as a goal.

It is also note worthy that there is little coordination of data gathering efforts by the International agencies, with inevitable over laps and duplication of efforts. The statistical cells in many Ministries are under funded, under staffed and lack essential equipment.

In the absence of overall supervision and guidance from CSO, these units do not have the professional know how to introduce the much needed changes. There are, however, notable exceptions such as the Statistical unit in the Ministry of Education. The Ministry has a web site and employs 39 staff in its statistical units in the Ministry. In addition, there is some 350 staff at the Governorate and District levels.

In 1998, the Ministry of Education conducted a 'General Educational Census', funded by the World Bank. This has since been updated yearly. The survey was supervised by CSO. There is continuous cooperation between the Ministry and CSO, especially in terms of technical support. The statistical staffs at the ministry receive training in statistics through CSO or the Social Fund for Development or UNICEF.

On the other hand, the FAO has worked with the Ministry of Agriculture and the CSO in technical areas pertaining to agricultural data. For example, FAO works with CSO on the program for 'Food Security and Vulnerability & Information Mapping System" (FIVIMS) – with the aim of identifying the poorer segments of society, the kinds of food intake, and suggestions to increase their livelihood. A national random sample survey- FAO FIVIMS- was carried out in 2003 as part of the Agriculture Census. FAO has given US\$ 250,000 for the project with additional support from the EU. FAO has also provided a Consultant to support the project. FAO and CSO have good working relations.

It was not possible, within the limited time available, to fully review the statistical system in place at all of the ministries. There is some evidence that data were collected but never published or the publication delayed for a long time, because of differences in findings by other surveys due to methodological differences. [However, there is evidence to indicate that the line Ministries are ill equipped to undertake meaningful statistical work as they are poorly staffed, under funded and lack technical know-how.](#)

[Building a credible statistical system will demand sizable investments and capacity creation in the various line ministries.](#)

The Central Bank of Yemen (CBY) plays a key role in data gathering. The CBY is a large institution with its head office in Sana'a and was incorporated in 1971 and has 19 branches. The CBY is responsible for the

compilation of the Balance of Payments. The Balance of Payments is compiled in accordance with the 5th edition of the IMF Balance of Payments Manual.

In addition, it compiles monetary and banking statistics in accordance with standards prescribed by the IMF. [The CBY faces challenges as there are sizable gaps in the availability of basic data.](#)

The Ministry of Labor and Social Welfare (MOLSA) is another line ministry that works closely with the CSO. In response to the sharp rise in the labor force, from 7.6 million in 1995 to 9.3 million in 2000, the MOLSA initiated a Labor Market Information System (LMIS), as a possible way to guide national policy in education, labor and macro-economic planning.

The LMIS effort has been supported by UNDP under the aegis of the 'poverty alleviation and employment generation program'.

LMIS phase 2 2003/2005 will assist the government of Yemen in developing a national capacity for human resources planning through labor demand and supply surveys.

A related goal is to link the 14 regional employment offices, which it is hoped will lead to improved employment services for the unemployed/ under employed.

MOLSA in collaboration with the CSO and the Social Fund for Development carried out the 2003 Labor Force Demand Survey. Phase 2 of the LMIS project will see even greater cooperation between the MOSLA and other major stakeholders such as the CSO, and other ministries such as Education and the private sector.

Government finance statistics are based on the data compiled by the Ministry of Finance. The Ministry publishes a quarterly publication 'Bulletin of Government Finance Statistics' on Government Finances. It has some short comings as sectors such as the social sector, government funds, and joint funds, are not covered adequately.

The Ministry of Finance is one of the major beneficiaries of the UNDP/IMF/DFID project entitled 'Strengthening Economic and Financial management'.

The prime goal of this program is to strengthen the capacity of governmental institutions and in particular the Ministry of Finance in its pro poor macro economic policies in the fiscal and monetary areas and manage public finances efficiently and effectively. The immediate beneficiaries of the program will be the government agencies responsible for macro economic policy formulation and implementation, including the Ministry of Finance, the Central Bank of Yemen, the Customs authority, the Tax authority and the Central Statistical Organization.

1.8 Overview of Strengths and Weaknesses

A key strength of the CSO is that it has dynamic leadership that is committed to the future development of CSO and has a clear vision for the future of CSO. Senior level management at General Director level have good experience and are well qualified in their respective areas of work. However, the organizational structure recently approved will need to be modified in the medium term along with the introduction of new management processes if CSO is to improve its capacity.

CSO HQ has an excellent main building facility, and a well-equipped training facility. However strengthening Governorate capacity will require close attention. Several of the offices are understaffed and ill equipped. Most Ministries have small statistical cells in operation. Some run better than others. In effect there are staffs in all Ministries who can be technically upgraded by CSO as part of an overall upgrading of statistical skills.

Although a system is in place for the flow of data from Ministries to CSO, there are bureaucratic hurdles. CSO has attempted to develop working relations with most, if not all Ministries.

CSO lacks an effective and coherent work program. Its work priorities have been generally driven by the availability of donor funding which is determined in large measure by donor data priorities. This accounts for the lack of sustainability of projects launched in the past.

The operating budget of CSO is relatively small. With the adoption of the proposals contained in the SMP, it is imperative that the Government commit itself to providing CSO with budget allocations that are adequate to support the enlarged work program. The past practice of relying upon donor financing of work programs is neither desirable nor realistic in the context of developing a sustainable statistical system.

The Government needs to make a serious commitment to keep work programs funded. On the other hand, issues pertaining to data reliability and timeliness will require close attention in the context of better data dissemination. A plan to interface with line Ministries will require a comprehensive review of the data collected by all Ministries, what else they need to collect to be useful to them and to national needs, and set a process in place to collect them.

The present statistical law provides CSO with enormous powers of oversight. The law may have an unintended affect by constraining line ministries from engaging in data dissemination. There is a clear need to revise the law.

CSO needs to be given responsibility to set standards, coordinate statistical programs but it needs to avoid setting itself up as the ultimate arbiter of what statistics should be published by whom.

Clearly, there have been some shortcomings in past technical assistance. The long term benefits have not been commensurate with the money spent. One area has been the inability of the projects to ensure that the people trained remain within the organization. Institutionalization of the knowledge gained from the projects has been less than effective. In part it was because the projects were personality based and not institutionally based. Second the trained staff moved on because of the terms of employment and in particular low salaries. The issue of the staff salaries has to be addressed.

Yemen, like many other countries, has had a tendency to embark on new collections, before exhausting the full potential of existing data, especially those collected through surveys. A robust database together with a strengthening of analytical capacity should permit fuller data mining.

1.9 An Assessment of Current Capacity and New Strategies

Overview:

Yemen's statistical system has come a long way since its establishment following the unification of the country. Considerable investments have been made in **physical infrastructure**, particularly at the HQ level. The CSO has at its disposal modest amounts of IT equipment. However, its utilization has been less than efficient as CSO lacks a functioning Local Area Networking capacity. The statistical units at the local level are inadequately endowed.

The CSO has also invested in developing the **statistical infrastructure** in terms of creating a household sample frame and a partial register of businesses.

Organizational development has proceeded with a restructuring of the CSO. The recently adopted structure combines a functional and subject matter orientation. The CSO has developed good working relationships with line Ministries and agencies.

Management processes and procedures for priority setting remain relatively weak. At the Governorate and District levels there appears to be an uneven pattern of development. Staffing strengths in a number of the Governorates are not commensurate with work loads.

Data development has proceeded fairly rapidly in the recent past. While CSO management claims that new initiatives have reflected national priorities and user demand for data, these do not appear to have been driven by an overall strategy or a set of priorities. As a consequence, there are overlapping data collection efforts while other areas e.g. basic data needed for compilation of national accounts, have received less attention.

The CSO has been greatly assisted by donor support and funding for particular surveys and data collection programs. Donor assistance has played a significant role in the acceleration of data collection. However, such assistance has had a downside to it in several ways. Donor driven priorities have greatly influenced the work program of CSO. Additionally, the issue of sustainability has not been fully addressed.

Strategic Vision: Building sustainable statistical capacities will demand close attention to a number of key issues. In the first place, CSO needs to develop an overall strategy for the further development of the Yemeni statistical system. The steps now being taken in developing a Statistical Master Plan (SMP) represent a commendable start in building a sustainable, efficient and effective statistical system that is responsive to user needs, and is guided by policies that promote good governance through

accountability and transparency. Key to this is the pursuit of policies that encourage data sharing and dissemination. The SMP should be viewed as a road map towards attaining these broader goals.

Legal Framework: The present statistical law falls short of international norms as it inadequately addresses a number of key issues. Model statistical laws spell out the duties and responsibilities of the person at its head; the constraints under which the statistical agency is supposed to operate; and the accountability that prevents it from abusing its rights or powers. The law dictates what the statistical agency is expected to do with the information respondents submit to it, and for which it is accountable.

Respondents are asked to comply with the statistical agency's demands for information so long as they can be justified in the name of the objectives set by the law. In exchange for intrusion upon privacy rights, the statistical agency is required to safeguard respondents' information. If the agency breaks this commitment, its officers are subject to certain sanctions. If respondents do not comply, they too are subject to certain sanctions, defined by law.

Statistical laws also define the mechanisms for ensuring coordination between different agencies of the government that are engaged in data gathering.

While laws differ from each other in length, style, detail, and scope, if they do not cover the fundamental points outlined above, they are incomplete. If Yemen is to embark upon developing a credible statistical system, it needs to first put in place the legal framework that meets international standards.

In drafting this law, the CSO needs to take into account the UN Fundamental Principles of Official Statistics, the model statistics act drafted by the United Nations, legislative enactments in other countries, and the opinions of interested ministries and departments. The statistics act should include at least the following provisions:

- The right to collect data;
- The obligation to ensure that the data collected are used only for statistical purposes, except with the express permission of respondents and except for certain types of data that are in any case publicly available;
- The right to access for statistical purposes data that have been collected for government administrative purposes;
- The obligation to ensure that no data pertaining to individuals are released either consciously or unwittingly;
- Freedom from political interference in the timing or content of data releases, i.e., independence of the statistical office from political pressure;
- Designation of an agency as the agency responsible for overall coordination of official statistics within the country; and
- Arrangements for appointment and removal of the chief statistician of that agency that do not depend upon political whim.

Viewed from the perspective of the UN Fundamental Principles of Official Statistics, and taking into account the experience of other countries, there are some additional areas that should be addressed. They include the coordination role of CSO and its relations with other data providers, ensuring confidentiality, and the legal requirement for a population census every 10 years. More fundamentally, provisions in the law to guarantee the independence of the statistical system need to be introduced in order to enhance confidence in the system. Perceptions do count and it is essential that these be met. Equally important is the need to harmonize the law to reflect the basic principles associated with the requirements associated with the IMF's *General Data Dissemination Standards* (GDDS).

Organization & Management: The recently adopted organizational structure requires fine-tuning and further rationalization along with the introduction of new management processes. It would also seem that there are many gaps in the newly designed structure that can be further improved for the future, among them being the following:

- Centralization of survey data and building of database systems, fully documented and easily accessible to potential users;
- Training of staff on the use of available database systems such as ORACLE;
- Schemes to retain experienced and qualified systems staff within the CSO;
- Increasing the pool of staff trained in the development and maintenance of database systems and;
- General training of staff on use of available operating system, and limiting the range of systems in use to a few of the latest.

At a broader level, CSO has an insufficiently developed management culture. This is attributable in large measure to:

- The bureaucratic tradition in the public sector as a whole with centralized decision making as the norm.
- The budgeting process does not emphasize the cost accounting dimension.

Successful implementation of the core statistical work program, identified as part of the SMP, resulting in sustainable improvements in data will demand parallel actions to strengthen organization effectiveness through institutional re-engineering. The introduction of new management approaches and practices to underpin the capacity of CSO to take on the statistical tasks in an efficient manner is critically important. Failure to introduce organizational change and management development could, on the other hand, have adverse implications for building sustainable capacities. Proposals for a restructuring of the organizational structure of the statistical system and the introduction of new methods of management need to be considered against the above background.

There are several areas that require reinforcement and re-engineering. These include budgeting and planning, strategic planning and financial management with emphasis on accountability and human resource management.

The present system for developing the work program specifies products/outputs and dates without priorities, strategies, methods or resource implications. Neither does CSO have full control over its contents, as issues involving resource implications are determined in isolation. In the absence of a cost accounting system that could chart the true costs, especially of staff inputs, of undertaking a particular statistical program, its budgeting processes are dependent on rule of thumb calculations. What is required, for both purposes of the budgeting exercise and resource management, is a system that permits the measurement of staff time inputs into each program. This will demand the introduction of time recording by every staff member.

An aspect of budgeting that merits special mention concerns the provision of funding for replacement of hardware. The issue is of particular relevance to the current project, which will finance the purchase of a sizable amount of hardware. Given the rapid rate at which equipment becomes obsolete, it is important to adopt arrangements that create a special Amortization Fund into which annual contributions are made. Future purchases of replacement equipment could then be met from such a Fund.

Beyond the budgeting and Annual Work Plan preparation, there is a need to establish a capacity to deal with the preparation of strategic plans for the medium term. The functions of a new Strategic Planning Department should include responsibility for the preparation of policy papers for discussion by a reconstituted National Statistical Advisory Council. The new Department should play the role of a secretariat to that body.

Parallel to this, CSO should embark on the introduction of new practices for human resource management. Three core activities should be:

- The introduction of staff time reporting; and
- A system of staff performance appraisals; and
- The adoption of processes that empower managers to provide feed back to staff, and work with them in improving individual performance. As a first step, CSO should develop a classification of tasks carried out in the various units. Additionally, a system for assessing staff performance incorporating reporting forms, the criteria for assessments, and training of managers in the use of the system should be put in place.

It is generally acknowledged that human factors and the clarity of goals and the cultivation of an appropriate environment are crucial factors that determine outcomes in terms of institutional efficiency and the fulfillment of project goals. Along with changes in the structure of CSO, it will be necessary

to develop a corporate culture that emphasizes team building, accountability and transparency, and quality enhancement. Additionally, senior managers need to come to accept that the biggest asset available to CSO is its staff and further investments in people are as critical as investments in hardware and equipment.

It will be observed that many of the recommendations concerning organizational development and new business processes are linked and interconnected. For instance, progress on survey project design and effective management is linked to reform of the organizational structure of CSO and the adoption of cost accounting. The restructuring of CSO is critical to the adoption of matrix management approaches to project development and implementation. Similarly, the adoption of cost accounting practices is dependent on appropriate institutional changes.

Likewise, client support must be seen in the context of the legal framework that recognizes the importance of coordination achievable with the establishment of a National Statistical Advisory Council.

As a further illustration of the linkages, it will be necessary that data dissemination be viewed as integral to the application of the GDDS requirements. The reform measures need to be seen as a package. Inaction on any element may affect related activities or processes. Progress on all fronts will be essential to the success of the entire project.

Core Data Development:

Data development to fill existing information gaps and meet stakeholder needs represents the single most important and challenging activity to be taken up in the context of a strategic plan for statistical development. The activities in this cluster represent the consolidated work programs for all components of the statistical system that includes the CSO and other agencies and entities. The new work program will need to embrace both modifications to existing data collection and the launch of new programs. Such an integrated statistical work program would need to be built upon two essential frameworks. These are the 1993 System of National Accounts (SNA) which offers a broad framework for organizing the range of economic statistics and the Millennium Development Goals (MDG) for organizing the compilation of social statistics.

The Census of Population constitutes a very important and priority statistical activity. The importance of the Census cannot be minimized. It will provide a baseline for the key demographic and social variables and will fill large gaps in information that seriously impede decision making. In addition, the Census will make a large and significant contribution to capacity building. Foremost amongst these contributions is the large investment being made to develop the physical infrastructure of CSO. Under the Census program, CSO

will receive sizable amounts of equipment (vehicles and IT equipment), training of staff in census methods, cartography, and use of IT. A direct output from the first phase listing of households and the related mapping of localities will lead to the creation of a household sampling frame, critically needed for the design and execution of household surveys.

The 1993 SNA provides an organizing framework for economic statistics. Based on the SNA categorization of institutional sectors, statistical collections can be appropriately organized.

For estimating the **Government sector's contribution** to GDP, the revenue/expenditure and development budgets of the government represent the primary data source. For the **Non- Financial Corporate sector** made up of all incorporated business, irrespective of size and type of sector activity, most countries obtain the data either from tax returns or by canvassing special surveys of enterprises. The data for the **Corporate Financial Sector** are generally obtained from statutory returns filed with the Central Bank. For estimating the contribution or share of **Households** to GDP, most countries rely upon a combination of tax records and household surveys of income expenditure. The **Rest of the World Accounts** are based on the balance of payments compiled from a combination of data from administrative records and special surveys.

To meet the needs for social, demographic and other data sets, separate collection arrangements need to be established. For most **demographic statistics**, the data can be obtained from the decennial census of population and vital registration records. **Social statistics** – health, education, welfare, and living conditions -can for the most part be derived from administrative records supplemented by survey data. The framework for these is provided by the MDG. The 48 key indicators encompassed by the MDG represent the core social and poverty related indicators that have been accepted at the international level for monitoring progress. Much of the information for compiling the MDG indicators will be based on administrative records; other information, especially that pertaining to poverty will need to be collected through household inquiries. The Household Income Expenditure Survey can be the main vehicle for collecting such data. Collecting **Labor market information**, vital to measurement of trends in employment and unemployment and hours worked, requires the special surveys.

In order to reduce the data collection burden on both the CSO and respondents, and based on the strategy outlined earlier, it is desirable to develop a compact program of surveys and arrangements for tapping administrative records to satisfy the major data needs of the nation.

As noted earlier, the compilation of national accounts demands the availability of basic data. Based on these considerations, and a review of the current capacity of CSO, any future work program needs to be cost effective. The suggested program of work presented in the SMP takes an integrated approach; it aims to maximize the potential role of other agencies of the

Government in generating data and supporting CSO. The task of building a credible system of economic and social statistics should be as a national task requiring co-operative efforts. The overall work program that emerges, while still large, attempts to deal with resource issues and implementation capacity given the existing levels of staff.

Technical Assistance and Building Sustainable Capacity:

Over the past decade or so, CSO received substantial support for specific survey activities and for management development and capacity building. Although donor assistance has been vitally important in the compilation of new statistical series, such assistance has only marginally contributed to the creation of sustainable capacities.

This can in part be attributed to the relatively limited attention paid to institutional development, staff turnover, adoption of effective management processes, and lack of clarity in priority setting.

One clear lesson is the absolute need to ensure that the goal of any intervention at improvements is not the writing of manuals and production of documents but the organization's willingness and ability to internalize the recommendations, and implement them consistently⁵. Another prerequisite is that there is management commitment to the recommendations and a system in place to see that all the proposed changes are followed through.

⁵ This is best illustrated by the development of Job Descriptions for all the staff under the Netherlands's funded TA program. Job Descriptions were in place for 100% of top management, 100% for General Directors and Directorate managers. However these were not utilized in the restructuring exercise done in 2003.

Box I: Using the SMP

The SMP is designed to serve a number of purposes. For CSO and other national data producers it will serve as a planning tool to identify work program priorities. The SMP also lays out the scope of institutional reforms that need to be pursued if Yemen is to develop a sustainable statistical capacity that meets the requirements of the nation. Institutional reforms that need to be embarked upon will need to cover organizational changes and management processes. A key step will be the adoption of a statistical law that emphasizes accountability and transparency. Amongst other uses, it will enable managers of the statistical system in quantifying budgetary and other resource needs, including technical assistance from external sources. Last but not least the, SMP defines the role and responsibility of different stake holders in the statistical system for data collection; it will thus permit more effective coordination among agencies

For external agencies and donors that are engaged in assisting the Government in the development of a functioning statistical system, the SMP will provide greater clarity about the aspirations of the Government and its priorities between competing statistical requirements. The SMP provides a framework for technical assistance and a basis for better coordination among donors within the context of the work program priorities established by the Government.

Part II: Strategic Plan for Statistical Capacity Building

2.1 Proposals for Institutional Restructuring and Strengthening

In preparing this strategic plan for the further development of the statistical system of Yemen, full account has been taken of lessons learnt from past technical assistance programs. Key lessons were that, although there were sizable external inputs, these were largely uncoordinated; no overall plan existed for the development of the statistical system; most programs supported by donors were ad hoc in nature with no clear focus on sustainability; a number of the programs were driven by the desire to collect particular data sets; and there was no serious thought given to define a coherent and integrated work program that reflected clear priorities. Additionally, much of the assistance was channeled towards knowledge transfer and technical skill development without addressing the issues of institutional restructuring through the adoption of sound management practices.

Furthermore, donors did not focus sufficiently on the adequacy of Government budgetary support to ensure sustainability of programs that were launched.

The SMP outlined in this document has attempted to address many of the limitations identified above. A key area of focus has been the need to develop the right environment within which data development can be pursued. For these reasons, special attention is paid to institutional strengthening, the identification of a core work program, and the estimation of the investments required, the technical assistance requirements to implement a coherent work plan and the elaboration of modalities for implementing the plan.

Institutional reforms and organizational development are central to achieving the key goals contained in the plan. For these reasons, it is appropriate to begin with an assessment of the kind of reforms that are fundamental to achieving the over-arching goals of the plan: building the foundations for a sustainable statistical system. Critical to this is the establishment of an appropriate legal framework.

Equally important is the restructuring of the statistical system in ways that leads to efficient use of resources through effective management. These are prerequisites to the carrying out of a work program that serves national data needs.

A carefully designed work program will need to be agreed upon. Great care will have to be exercised in determining the scope and sequencing of data collection, and striking a balance between data demands and the capacity of the statistical system as it builds itself.

A clear division of labor between the CSO and other agencies will have to be agreed upon. A broad division would assign primary responsibility for household and enterprises surveys to the CSO along with the compilation of the national accounts and price statistics; other agencies would need to assume responsibility for statistical series linked to administrative records.

Thus for instance, the Ministry of Finance would need to assume responsibility for government finance data; the Central Bank for banking and financial statistics; the Customs for trade data; and line ministries for data on agriculture, health and education.

Although good relations exist between the CSO and line Ministries, in the near term, the CSO should aim to establish a capacity to coordinate statistical activities, set standards, and act as a clearing house for data collected by other agencies. It should not attempt to assume a role as the sole collector of data. The CSO should also avoid seeking to play a role as a monopolistic provider of official data. It must come to terms with the reality and take account of the fact that in a modern statistical system, the national statistical agency cannot be the sole agency for data collection and dissemination. These responsibilities are shared responsibilities.

That said, it is important that it carries out coordinating and standard setting functions. To this end, the statistical law should clearly spell out the range of functions it needs to carry out. In its coordinating role, the CSO should be guided by a National Statistical Advisory Council.

A related issue concerns the data dissemination function. Dissemination must be seen as more than the publication of statistical reports. Effective dissemination can only be achieved through data sharing by way of providing access to data bases. Such access should however take account of the need to ensure that statistical confidentiality of unit records is maintained as provided for under the law. Failure to guarantee confidentiality of individual records can bring about a loss of confidence in the integrity of the statistical system leading to increased non-response and the consequent deterioration in data quality.

There exists a culture of information hoarding, a legacy handed down from an era of central planning. Overcoming this legacy and creating greater transparency will be challenging and will have to be achieved via an educational process and the establishment of clear rules concerning data sharing and dissemination. Gradual adoption of the GDDS will make a contribution.

The present statistical law requires review and some modification. It falls short of international norms as it inadequately addresses a number of key issues. Model statistical laws spell out the duties and responsibilities of the person at its head; the constraints under which the statistical agency is supposed to operate; and the accountability that prevents it from abusing its

rights or powers. The law dictates what the statistical agency is expected to do with the information respondents submit to it, and for which it is accountable.

Respondents are asked to comply with the statistical agency's demands for information so long as they can be justified in the name of the objectives set by the law. In exchange for intrusion upon privacy rights, the statistical agency is required to safeguard respondents' information. If the agency breaks this commitment, its officers are subject to certain sanctions, defined by law. If respondents do not comply, they too are subject to certain sanctions, defined by law.

Statistical laws also define the mechanisms for ensuring coordination between different agencies of the government that are engaged in data gathering. While laws differ from each other in length, style, detail, and scope, if they do not cover the fundamental points outlined above, they are incomplete. If Yemen is to embark upon developing a credible statistical system, it needs to first put in place the legal framework that meets international standards.

Successful implementation of the core statistical work program resulting in sustainable improvements in data will demand prior actions to strengthen organizational effectiveness through institutional strengthening. The introduction of new management approaches and practices to underpin the capacity of CSO to take on the statistical tasks in an efficient manner is critically important. Actions designed to strengthen the organizational capacity of the system would also go a long way in facilitating the development of and execution of sustainable work programs. Failure to introduce organizational change and management development could, on the other hand, have adverse implications on both the execution of the plan and its sustainability in the long run. Equally critical to success is the education of users and stakeholders in the unique role of data in a market economy environment.

User appreciation and acceptance of the nature of new data sets and how they are policy relevant, is essential if CSO is to obtain support from users in its efforts to transform the statistical system. Educating users will ensure greater acceptance of the changes that must be introduced in the content and scope of the work of CSO.

Proposals for a restructuring of the organizational structure of the statistical system and the introduction of new methods of management need to be considered against the above background.

A number of generalizations concerning statistical organizations are in order⁶. Three broad aspects concerning the organizational structure of a national statistical system merit special mention. These are:

First: the extent to which responsibility for statistics is assigned to a single government statistical agency or spread amongst several;

Second: the way in which responsibilities are divided between the lead statistical agency and other agencies; and

Third: concerns the division of responsibilities between the national Central Office and regional statistical offices.

There are essentially two basic models for organizing national statistical services: centralized and decentralized statistical systems.

In the *centralized model*, responsibility for data collection is primarily concentrated in one statistical agency. Statistics Canada and most West European nations have adopted this model.

In the *decentralized model*, the responsibility for primary data collection (based on surveys) is divided among several agencies, one agency being responsible for, say labor statistics, another for agricultural statistics, and so on, with one agency being designated the nominal leading agency. The US statistical system provides an example, with the Office of Budget and Management playing a coordinating role.

Yemen currently has, on paper, a centralized system and there do not appear to be pressing reasons for a modification of the current model, which follows the European and Canadian models, with the pressing need to rehabilitate the governorate offices.

As regards the sub-regional dimension, staff can be concentrated in a few locations or they can be spread across the regions, substantially depending upon the overall organizational and administrative structure of the government. Three possible models exist:

Large Head Office Model

In this model, staff and functions are focused in the head office. For example, Statistics Canada is strongly centralized, having relatively small regional offices whose main focus is personal interviews and dealing with data users. The advantages of this arrangement are the operational efficiency and the scope for head office control and enforcement of standards.

Dispersed Head Office Model

In this model staff and various functions are dispersed amongst regional offices, with each regional office specializing in different functions. For example, in Australia, 50% of the staff is in regional offices, and each regional office is responsible for a specified set of surveys and infrastructure functions. The Tasmanian State Office handles all agricultural statistics; the Victoria

⁶ For a fuller discussion of statistical organizational issues see *UN Handbook on Statistical Organization*

State Office maintains the statistical business register. This arrangement preserves some of the processing efficiency of the large head office model in circumstances where staff must be located in the regions in line with government policy.

Regional Office Model

In this model, large regional offices all have identical functions, including all types of data collection within the region. This arrangement is typified by the German statistical system.

The advantage of this arrangement is the close geographical contact with respondents. The disadvantages are the duplication of overhead costs and the scope for variations in applications of standards, procedures and systems across regions.

The Soviet statistical system, for reasons of both history and the administrative structure of the government essentially fitted the Regional Office Model.

The Yemeni system approximates the large office model. The offices at the Governorate level are relatively small, with a staff complement of between 2 or 3 staff. There do not appear to be any overwhelming reasons for altering the broad structure now in place. In any event, changing the model would demand vastly expanding the provincial level offices. This is neither feasible for reasons of budgetary and skill shortages nor desirable in the light of the prevailing overall structure of the government.

2.2 The Case for a Reallocation of Responsibilities

An overriding issue is that of the appropriate distribution of functions and staffing between component parts of the statistical system in order to make the system reflect the changing nature of statistical operations and the mode of data collection.

Acceptance of the need to turn to sample surveys as a primary method of data collection to replace the reliance on past practices designed to obtain complete reporting, common in centrally planned economies, demands a reorientation of the responsibilities and functions of statistical offices at the various levels of the system. The reorientation would require a clear division of responsibilities between the components to remove duplication. In a re-engineered system, the functions of the offices at the three component levels would ideally take the following broad form:

HQ Office:

Overall management and oversight of the statistical system and definition of statistical policy; establishment of standards and methods; design of all surveys; data management and dissemination; staff training;

Governorate Offices:

Responsibility for survey operations, updating of sample frames and business registers;

Line Agencies:

Responsible for all collections and compilations based on administrative data collection with the support and guidance of the CSO.

It must be stressed that the allocations of responsibilities and functions between the three tiers of the statistical system need to be carefully delimited for enhancing the system's potential capacity and for it to emerge as a robust, efficient and cost effective entity. It must be further stressed that meeting the overarching objectives of establishing a strong, efficient and cost effective statistical system in a given country demands structural and institutional changes.

If no actions are taken to restructure the system, there are high risks of failure. It should also be noted that effective implementation of the core work programs identified in the SMP will demand institutional and structural changes.

The new approach to data collection, relying more heavily on the use of sample surveys, can only be satisfactorily implemented with a reformed organizational structure that embodies specialized units dealing with sampling, questionnaire design etc. and an effective field unit for data gathering.

Similarly, the full gains from the use of enhanced IT capacity will only be achieved if the necessary institutional and structural reforms are completed.

To meet the goals of greater user orientation and enhanced dissemination of data, it is necessary that the institutional arrangements in place are supportive.

In brief, the institutional and structural reforms have to be seen as a key first step leading to the implementation of the proposed changes in the work program. A realignment of functions and responsibilities along the lines outlined above is essential and imperative if the CSO is to vigorously pursue a program of reforms and begin implementing the work program utilizing data collection methods based on sample surveys.

A realignment of functions will demand a restructuring of the organizational setup of the CSO HQ, and some realignment of the responsibilities of the Provincial statistical offices.

Although Yemen's statistical system was patterned on the Soviet (centralized) model, the Governorate and District level offices were not fully developed. Thus, major restructuring of the system can be limited to the HQ level.

A concurrent issue is that concerning the internal organizational structure of the statistical office. The internal structure of a statistical office can take several forms. It could either take a subject matter approach in establishing units, or a functional approach. The *subject matter approach* typically contributes to specialization by subject areas and the development of pools of subject matter expertise. Thus, at the extreme, staff deployed in say a unit dealing with agricultural statistics, would typically be made up of specialist agricultural statisticians. However, they would need to have the requisite knowledge of sampling methods, survey operations, and data management practices. Over time a unit so constituted would become a self-contained unit with few interactions with other units in the institution. There would emerge a tendency to have staff that is in a sense "Jacks of all trades but masters of none." There are clearly disadvantages that out weigh any gains from an overall institutional viewpoint.

It is generally acknowledged by most management specialists that the vibrancy and effectiveness of a modern organization are best ensured by the existence of a strong team culture that draws on the best talents available. Advocates of these views argue that efficiency is best ensured through a process of specialization and the use of specialists in a team based approach in implementing particular tasks. Thus, in the example cited in the case of producing agricultural statistics, under a *functionally based approach*, the task would draw on specialist sampling experts, questionnaire designers, field operational units, IT personnel etc. to design, execute and analyze an agricultural survey. Staff with requisite skills would be grouped in functional groups. Each of these groups would be staffed so that there is a critical mass

of specialists available in the organization. Specialization in this manner would contribute to the more efficient use of skills, better contribute towards the overall mission goals of the statistical office and at the same time reduce the tendency towards the emergence of self contained cells or units. The task of creating a cooperative and reinforcing team culture is greatly facilitated through adoption of a functional approach in the structuring of an institution.

The characterization outlined above is somewhat abstract but favors a functional approach to statistical organization. Typically many statistical organizations, particularly those operating under the centralized model, have tended to begin with an organizational structure that has a subject matter orientation but over time moved towards a structure that blends the subject and functional approaches. The current broad patterns in many countries indicate an organizational structure grouping functions in the following manner:

- (i) Economic data collection, processing and analysis - often referred to as *subject matter areas* or *branches* - concerned with the collection of economic data by individual surveys and from individual administrative sources and including the business register;
- (ii) Social data collection and processing - the other subject matter areas concerned with social statistics;
- (iii) National accounts, balance of payments and economic analysis - areas concerned with integration and analysis of data from surveys and administrative sources;
- (iv) Marketing and dissemination – assessing user requirements, segmenting users into groups, managing output;
- (v) Concepts, standards and methods - developing, promoting, and monitoring use of a common conceptual framework, survey best practice, and quality management;
- (vi) Information technology - developing and promoting effective use of data processing, data and metadata management, and communications technology;
- (vii) Management and services - budgeting, planning, personnel, pay, training.

These functions may be combined or split in a variety of different ways. In summary, there is no right organizational structure. The important point is that all the functions are present and the various units communicate effectively. Further guidance regarding the organizational structure is provided in reports and papers by the ECE/UN (1997) and Conference of European Statisticians (1998).

The current structure of the CSO is essentially a cross between the subject matter and functional approaches. It will be observed that many of the units deal with specific subject matter fields, - agricultural statistics, national accounts, household surveys etc., and the administrative units are functionally

oriented. Special arrangements are in place in respect of the IT, data dissemination and methodology functions.

The critical question that arises is: Is the present distribution of functions across CSO optimal in terms of being able to support the new work program and the modalities for data collection as envisaged under the reform program now under development? There are other secondary questions. These include:

- Is the structure in place effective and efficient from the perspective of resource use?
- Does it facilitate good communication within and between functions, in particular between data collection areas and the national accounts area?
- Are the current arrangements conducive to supporting task oriented matrix management?

A broad response to these questions would be that there is considerable room for streamlining the present structure of CSO to contribute in a positive manner to overall institutional strengthening. A realignment of functions is therefore recommended. The starting point for the proposed realignment is the nature of the proposed work program of CSO, the new modes for data gathering with emphasis on the use of sampling procedures, and the introduction of new management approaches designed to achieve greater efficiency and cost effectiveness. The proposals also take account of the need for adoption of management practices that contribute to the development of a new corporate culture that emphasizes client orientation, enhanced data quality and maximum returns to the resource inputs.

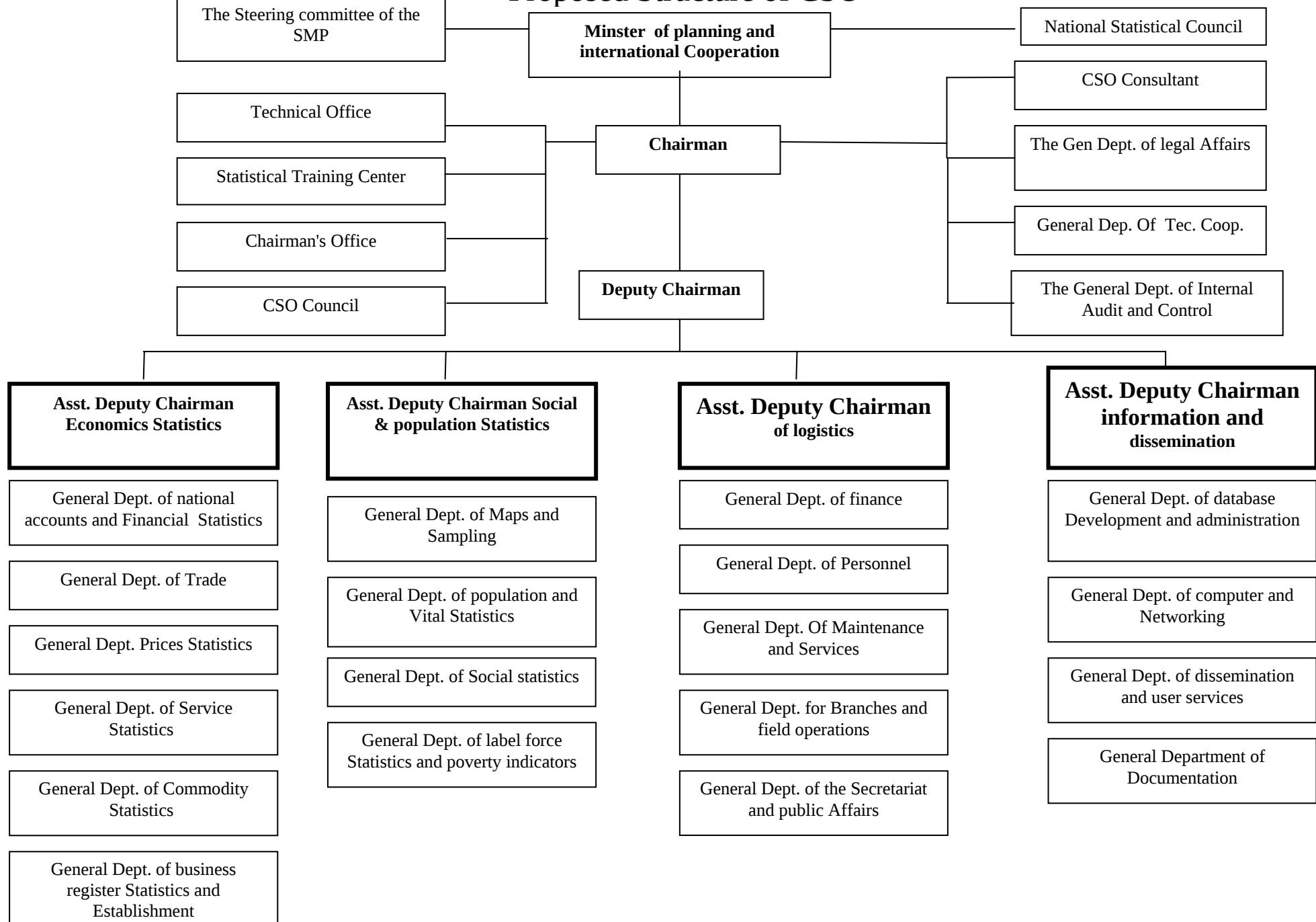
It will be noted that the proposed work program emphasizes the consolidation of primary data gathering centered round a limited number of surveys supplemented by accessing administrative records. It will be further observed that proposals concerning data gathering emphasize the critical role of sampling as a tool. On the issue of better servicing of client needs and stress placed on data dissemination, the role that IT can and should play has also been emphasized. Based on these considerations, an optimal arrangement would lead to an organizational structure that demarcates the following grouping of functions into a number of clusters.

- **Statistical infrastructure**: Sampling frames, business registers and classifications.
- **Methodology and Design**: Sample design, experimentation and questionnaire design.
- **Field Operations**: Data collection
- **IT Function**: Development and management of institutional databases and metadata bases; technical support to operating divisions.
- **Operating Departments**: Household surveys, enterprise surveys; price statistics national accounts; external trade and financial statistics; social statistics; demography.

- **Data dissemination and client support.**
- **Management Services:** Strategic planning; Finance and Budgeting; Human resource management including training; External Relations.

These proposals are translated into the organizational structure depicted below.

Proposed Structure of CSO



2.3 Statistical Infrastructure

The sample frame of household units will need to be developed based on the results of the First Phase Population Census of 2004. While the Census will provide a listing of all households in small area localities, internal migration and population shifts will result in making the listings outdated over time. It is therefore essential that steps be taken to design a master sample frame that is continuously updated.

Similarly, the development and maintenance of a business register will demand strong partnership arrangements with the Ministry of Trade, the Union of Chambers of Commerce and other agencies that license businesses.

Although CSO has made some progress, further work on classifications is critical to the development of a functioning business register. It is also critical to almost all statistical operations both in the survey context and the realm of administrative statistics.

CSO as the standard setting agency needs to ensure that all classifications it develops are used across the entire statistical system to achieve data harmonization and consistency.

Methodology and Design

At the present point in time the responsibility for methodological development is a shared one between the different Departments of CSO. This divided responsibility is in part attributable to the limited staff skills available within the CSO. The present arrangements are not optimal and CSO must develop an in-house central capacity that can play a pivotal role through interactions with other units in developing sample designs, experimenting with alternative designs, designing questionnaires and pre-testing them. In the longer term, the work of these unit(s) will come to provide intellectual leadership and contribute to improvements in data quality.

Field Operations

As the CSO moves towards the launch of new and more complex sample surveys, it is inevitable that interviewing respondents will assume greater importance. Furthermore, making meaningful improvements in data quality will demand upgrading the capability of interviewers through systematic training and closer supervision. CSO will need to play a role in establishing guidelines, plan and manage field operations, train field operatives and to evolve new approaches on the basis of feed back obtained from the field.

IT Function

The role to be played by IT in the future will need to be different. In the past data capture was done at the local level. At the HQ level the focus was on the production of summary reports in the form of standardized tables. The Computer Center was responsible for the preparation of aggregated tables and supplying summary tables for incorporation in reports. Only limited attention was paid to the creation and maintenance of institutional data bases.

In the future, under the current project, the IT function will need to be drastically redefined and restructured. Data entry and validation will continue to be undertaken at the local level.

To this end, it will be necessary to upgrade the hardware at the local level. At the HQ level, the necessary capacity should be in place to manage an institutional data base. LAN arrangements will need to be strengthened. The capacity to undertake fuller validations, make appropriate imputations for missing data and analyze the data will demand new investments in software.

The above recommendation requires some elaboration. The access to unit records at the HQ level represents best practice and is the norm in almost all statistical systems. It has several benefits. It provides professional staff with the ability to review all data, identify “outliers”, make informed judgments and corrections, and take appropriate steps that contribute to data quality enhancement.

More importantly, the availability of unit records permits the creation of detailed databases that have detailed time series for the purposes of both cross-sectional and time series analysis.

With the setting up of Local Area Networks in the Operating Departments, it will be feasible to engage in greater data sharing. Each of the Operating Departments would need to have IT professionals to perform specialized functions. In the proposed IT environment, the need for customized systems and software would be largely eliminated. The Operating Departments would rely on commercial software. The role of the Computer Center under the scenario painted above would change. The Center would have responsibility for equipment maintenance, and providing IT training to staff in the other units of the CSO. However, its major functions would be to develop and maintain the institutional database along with a Meta database. The proposals outlined above represent best practice in most of the advanced statistical offices in market economy countries.

There are several implications arising from the above proposals. In the first place, sizable savings can be achieved. Moving aspects of the IT function from the a central location to where data operations are actually carried out (in the Operating Departments) will ensure that IT plays an effective role in contributing to enhanced productivity and greater efficiency.

The proposed arrangements would achieve several specific objectives which include:

- Increasing staff resources available for data work in the main CSO Departments; permitting maximum exploitation of PC based technology;
- A desirable downsizing of the of the Computer Center whose current staffing was set in a period when mainframe driven applications were the norm;

- Enable the restructured Center to focus on the development and maintenance of the institutional database and meta database; engage in strategic planning in the IT area; develop its revenue earning activities;

It is imperative that in acquiring new hardware, account is taken of the need to provide adequate computer storage capacity. The design of the institutional database will need to factor in the need to incorporate unit records into the database.

Data Dissemination and Client Support

The existing organizational structure does not provide for these functions. The emphasis is on releasing data through periodic reports and the Yearbook of statistics. The primary audience served is made up of government agencies and ministries. In the absence of a large functioning private sector, servicing the needs of that sector is largely seen as secondary. Client support does not feature strongly in the work of the CSO.

Some rationalization of present policies and practices is needed in the light of changed circumstances. In a market economy environment, the private sector will in time emerge as an important and significant user of data. Present processes are not sufficiently geared to meeting these demands. New policies and procedures are needed along with the necessary institutional arrangements. The policy regarding imposing fees should be reviewed and brought into line with the best practices of other statistical agencies. In the longer term, CSO should have the power to make cost recovery in instances when it meets special requests from clients in both the public and private sectors. As regards meeting regular, as opposed to special requests, data needs of other agencies, there is a clear need to review the content and frequency of regular reports.

Management Services

The present somewhat rudimentary arrangements for dealing with administrative, financial, human resource and external relations functions require radical strengthening. There are several areas that require reinforcement and re-engineering. These include budgeting and planning, training of staff within the context of human resource management, strategic planning and financial management with emphasis on accountability.

As providers of essential information, national statistical offices have to take the quality of their products and services very seriously. This has been a central pre-occupation of most statistical systems. As the performance of statistical services, and indeed of government services in general, have come under closer scrutiny in many countries, quality management has lately become a focal issue. Obviously, there are many sides to the 'quality' of official statistics. To mention some of the most important aspects: official statistics must be:

- Relevant
- Timely and
- Accurate,

But they should also be:

- produced cost-effectively, and
- Without too much of a burden for data providers.

The IMF's General Data Dissemination Standards (GDDS)

GDDS Document October 2003.doc November 19, 2003 (9:08 AM)

THE GENERAL DATA DISSEMINATION SYSTEM

November 2003

1. The General Data Dissemination System's (the System) objectives, comprising four dimensions of good practices in data production and dissemination, are set out in Section I, and the System's mechanism of implementation is set out in Section II.

I. The System: Objectives

2. The System's purposes are (1) to encourage member countries to improve data quality; (2) to provide a framework for evaluating needs for data improvement and setting priorities in this respect; and (3) to guide member countries in the provision to the public of

comprehensive, timely, accessible, and reliable economic, financial, and socio-demographic

statistics in a world of increasing economic and financial integration. The guidance comprises four dimensions:

- ☐ The data: coverage, periodicity, and timeliness
- ☐ Quality of the disseminated data
- ☐ Integrity of the disseminated data
- ☐ Access by the public

3. For each of the four dimensions, the System describes two to four good practices to serve as objectives in the development of national systems of data production and dissemination. Box 1 provides an overview of the four dimensions and these elements.

1. The data: coverage, periodicity, and timeliness

Production and dissemination of reliable, comprehensive, and timely economic, financial, and socio-demographic data is essential to the transparency of macroeconomic performance and policy.

a. Definitions and general considerations

(1) Coverage

4. The System focuses on the data that are most important in evaluating performance and policy in four macroeconomic sectors—real, fiscal, financial, and external—as well as

complementary socio-demographic data that shed light on economic development and structural change. The socio-demographic data as specified under the GDDS are closely aligned with the majority of the indicators used to monitor progress towards the Millennium

The objective of the GDDS is to encourage the production and dissemination of complete sets of data with widest coverage, based on international methodologies. The GDDS provides recommendations on good practice, based on current practices of agencies compiling and disseminating data in countries. Recommended good practices refer to coverage, periodicity, and timeliness. The data dimension in the GDDS is closely linked to the quality dimension, within which plans for improving data quality form an integral part. The focus for the access and integrity dimensions is on the development of policies and practices in line with the objectives of dissemination of readily accessible and reliable data. Information on access and integrity of the data and, especially, the agencies that produce and disseminate them, is essential in building confidence of the user community in official statistics. In brief, the GDDS serves a useful purpose as it:

Encourages member countries to improve data quality;

Provides a framework for evaluating needs for data improvement and setting priorities in this respect; and

Guides member countries in the dissemination to the public of comprehensive, timely, accessible, and reliable economic, financial, and socio-demographic statistics.

Yemen would be well served by aiming to subscribe to the GDDS.

Each of these major quality aspects of official statistics requires its own quality management approach. National statistical offices appear to adopt various approaches to quality management. Some have opted for a system of Total Quality Management (TQM), others aim at certification along the lines of the ISO-9000 system.

For example, in 1996, Statistics Netherlands adopted a comprehensive quality program, laid down in the form of a 'business plan' for the next decade. Two specific components of this overall quality program merit mention.

First, Quality Guidelines need to be established and be accompanied by a system of 'statistical auditing'. The focus of statistical auditing in this sense is on the quality of the statistical production process. This implies that it relates primarily to the quality elements 'timely', 'accurate', 'produced in a cost-effective manner' and 'without too much of a burden for data providers'. 'Relevance', though an important part of the quality guidelines, is usually not covered in depth by the statistical audits.

Second: There are other mechanisms to measure user satisfaction with the output in general and with individual sets of statistics in particular. These too are set out in the business plan. In the Netherlands, the business plan incorporates six elements:

- A relevant work program
- Reduced respondent burden
- Effective statistical information
- Comprehensive quality management systems
- Adequately trained and motivated staff
- An efficient, well managed, flexible organization

As in the Netherlands, similar activities have been underway at Statistics Canada for a number of years.⁷

At the present point in time CSO lacks a full capacity to plan. There is an even greater need to prepare an annual plan or to identify priorities, strategies, methods or resource implications. This will enable CSO to make informed choices between options. At present, these are to a large extent driven by donors and availability of funding from external sources. Neither does CSO have in place a system of costing out specific statistical programs based on an accounting system that could chart the true costs, especially of staff inputs, of undertaking a particular statistical program. Its budgeting processes appear to be dependent on rule of thumb calculations. What is required, for both purposes of the budgeting exercise and resource management, is a system that permits the measurement of staff time inputs into each program. This will demand the introduction of time recording by every staff member. With the eventual introduction of Program Budgeting by the Ministry of Finance on a government wide basis, CSO will be under pressure to introduce processes that will enable it to conform. Time reporting linked to particular tasks and processes would represent one such element. It is recommended that CSO management launch a pilot project for time reporting for a selected statistical activity. After sufficient experience has been gained, the scheme should be extended to all staff.

An aspect of budgeting that merits special mention concerns the provision of funding for replacement of hardware. The issue is of particular relevance at the current point in time as CSO is likely to acquire a sizable amount of hardware. Given the rapid rate at which equipment becomes obsolete, it is important to adopt arrangements that create a special Amortization Fund into which annual contributions are made. Future purchases of replacement equipment could then be met from such a Fund. Establishing such a Fund will demand the concurrence of the Ministry of Finance.

Beyond the budgeting and Annual Work Plan preparation, there is a need to establish a capacity to deal with the preparation of strategic plans for the medium term. The functions of a new Strategic Planning Department should include responsibility for the preparation of policy papers for discussion by a National Statistical Council. The National Statistical Council should address broader statistical policies, and coordinate statistical activities across all agencies of the Government. The new Department should, amongst its duties, play the role of a secretariat to that body.

Human Resource Development

An important dimension of human resource management is represented by skill upgrading and knowledge enhancement. This process needs to be seen as a continuous exercise. CSO is in dire need of upgrading rapidly the skill level of its staff because of the circumstances that have prevailed over the past two

⁷ See Quality systems and statistical auditing. A pragmatic approach to statistical quality management; Willem de Vries and Richard van Brakel

decades. This will be attempted via a sustained program of training delivered by donor agencies under the technical assistance envisaged in the SMP.

The training delivered will need to be internalized. It must be emphasized that the programs offered will need to be geared to the imparting of practical skills and applications directly linked to ongoing work programs.

The SMP envisages a sizable effort to deliver training as part and parcel of the work program of the project. It is imperative that such training is internalized and placed on a sustainable basis so that there is a multiplier effect. It should be further stressed that training and knowledge renewal are a continuing function in an organization that wishes to remain at the cutting edge.

Investing in staff has the greatest returns. It is therefore imperative that the necessary institutional arrangements are developed to permit these goals and objectives to be achieved. CSO has made a good beginning by establishing a Training Center. The CSO should take responsibility for developing and sustaining a program of in-service training, preparation of training materials for dissemination to the lower tiers of the statistical system, and be involved in the defining of long term institutional needs for different skills. The Center should play a direct role in organizing short training courses, with a heavy practical orientation, drawing on staff from across CSO and external consultants. Given the weak state of statistical capacities in the various line ministries and agencies of the government, CSO should include staff from these other agencies in training programs it mounts.

2.4 Proposed sequencing of activities

The program design calls for a broad range of activities that are carefully integrated. The appropriate implementation strategy will need to ensure simultaneous movement in each of the cluster of activities. Within this general framework, the activities envisaged under organizational development will need to proceed as a launching and lead activity. Certain of the key activities are highlighted below, along with the broad sequencing of activities within each cluster.

- (i) Creation of an environment within which Organizational Development involving reform and strengthening can be best advanced through exposing stakeholders to the nature of a statistical system in a market economy, the SNA as an organizing framework, the importance of managing resources and priority setting. This activity should be completed before proceeding with the core program. The four elements of the core program will be implemented concurrently and in tandem to ensure balanced development.
- (ii) Creating and enhancing the Statistical Infrastructure to support statistical activities, including the development of business registers, sampling frames, database development, adoption of classifications and development of physical infrastructure including IT capacities.
- (iii) Based on the institutional sectoring arrangements embodied in the 1993 SNA, the MDG goals, several data gathering activities will need to be launched. These encompass Household Sample Surveys, Enterprise Statistics, Surveys of Economic Activity, Price Statistics, Financial & Monetary Statistics, External Trade & BoP, and National Accounts. For social statistics data gathering will essentially be based on administrative records augmented by data from household surveys. Statistical Training should be identified as a separate element in the project to help develop a facility to permit sustainable long-term capacity to meet the long term needs of the statistical system.
- (iv) Given the relative weaknesses in the IT area, separate activities, beyond the procurement of hardware and software, involving data base development and dissemination will need to be pursued.

Implementation of the core work program will demand the initial creation of a deeper appreciation of the orientation of a modern statistical system. Secondly, the necessary statistical and physical infrastructure needs to be in place to permit the execution of the core work program. The core work program, while defined in the Master Plan, would need to be elaborated and updated annually. The core program is built upon a consolidation of existing surveys centered round an integrated multi-topic household income- expenditure survey patterned on the World Bank's Living Standard Survey (LSMS) and an integrated

business enterprise survey designed to collect the full accounts of corporate entities.

The rationale for consolidating survey activities is provided by the need to maximize the use of resources, preclude over-stretching capacities, and to permit better management. In addition, it is designed in a manner that would reduce respondent burden. The core program incorporates key statistical series that are commonly compiled in most market economies to meet the data needs of all stakeholders.

The program emphasizes training and skill development as a key variable for building a sustainable capacity. Training should be seen as a distinct component in the project. However, skill development, linked with the practical aspects of statistical operations, should be viewed as part and parcel of the mainline activities associated with data gathering and handling. For reasons of efficiency and maximum impact, skill development should be woven in with the substantive data related activities.

External consultants should be required to offer hands on training in the context of providing technical inputs. The emphasis should be on learning by doing. The project cycle should be:

initial training → identification of tasks → local execution → review of progress and finalization

2.5 Organizational Development

Institutional restructuring by itself will be insufficient for the creation of an effective statistical system for Yemen. It will demand programs that promote organizational development, apart from investments in infrastructure, development of appropriate statistical infrastructure, a capacity for training and human resource development and the establishment of clear and coherent policies for data sharing and dissemination alongside the development of functioning databases.

A first and necessary set of key actions concerns institutional reforms. Among the reforms that will require to be pursued are:

- (i) Review and revise statistical legislation, where appropriate, by incorporating international best practice to guarantee independence of the system and respect for statistical confidentiality.
 - Establish mechanisms for coordination and effective management covering both human resources and financial management
 - Establish a National Statistical Advisory Council
 - Restructure CSO
 - Launch development of statistical and physical infrastructure investments.
 - Adopt a core work program and begin its implementation with the help of technical assistance.

Organizational Development and Management

Organizational Development and Management	Activities	Inputs	Outcomes
a - Study Tours for Senior Managers	25 managers	3 consultants - 4 weeks	Exposure to practices
b - Statistical Policy Seminars	• 2 Seminars for CSO HQ • 2 Seminars for statistical units • Seminars for data users • Seminars for media people • Study tours	1 consultant - 3 weeks	Understanding role of statistical systems in market economies
c - Review and Revision of Statistical Legislation	(i) Re-writing the Statistical Law (ii) Finalizing the Structural Chart (iii) Writing the internal charts for regional offices	1 local consultant – 4 weeks	Revised legislation
d - Directory of Statistical Outputs	Preparation	1 consultant – 3 weeks	To better acquaint users
e - User Need Assessment	1- Consultations 2- Study tours	2 consultants – 8 weeks x 2 visits	Establish needs of all stakeholders
f - Financial and Budget Management	1- Workshop; 2- Project Prep; 3- Training; 4- Pilot; 5- Full system implementation	1 local consultant – 10 weeks Equipment	Put in place budgeting and financial management systems geared to program budgeting
g - Human Resource Management	1- Workshop; 2- Study tours	2 Consultants- 6 weeks; 1 Local Cons. – 6 weeks Equipment	Establish comprehensive human resources system
h - Statistics in a Market Economy	1- 2- 3-	2 Consultants - 4 weeks	Greater understanding of use of statistics in a market economy –User education
i - Statistical Organization	1- one workshop for managers. 2- 3-	1 consultant – 2 weeks	Refine organization structure

The following actions are recommended to be taken in pursuit of improving policy, the regulatory and institutional framework in which the CSO operates:

a. Study Tours for Senior Managers

The senior management team at CSO should visit the statistical offices of selected neighboring countries to obtain first hand insights into the experience of these countries in managing the process of statistical reform. Four themes should be central to the discussions:

- Educating stakeholders and obtaining their support for statistical reforms;(the participatory mechanism)
- Introduction of financial and human resource management tools;
- Introduction of modern IT and organizational change
- Data dissemination.

b. Statistical Policy Seminars

The Seminars should have the participation of high-level Government officials, representatives of the private sector and CSO managers. The key underlying themes would be the changed role of statistics in a market economy, the role of various stakeholders, safeguards for maintaining the integrity of the statistical system, the importance of priority setting, and adoption of international standards and best practices. The seminar would also present an opportunity to “market” the current program and raise the profile of CSO.

c. Review of Statistical Legislation

The existing statistical laws, as noted earlier, are outdated and are inconsistent with norms in use in most countries. For instance, they do not sufficiently address the need for accountability and transparency, and terms on which data are accessible to various stakeholders. Revised legislation that incorporates globally accepted principles needs to be enacted to make clear the role of the statistical system and its management. The new laws should be seen as a charter for the entire statistical system. The consultant appointed for this review should be requested to recommend amendments to the existing law, particularly regarding stipulations on equal information access, relationship between the CSO and other data providers, as well as data confidentiality. The issue of establishing a consultative and a participatory mechanism (e.g. National Statistics Advisory Council) to enable adequate consultations with users should also be addressed⁸.

d. Directory of Statistical Outputs

Presently there is no comprehensive and consolidated documentation describing the various statistical series and indicators compiled in Yemen. The study, by a local consultant, reviewing the range of statistics presently compiled by different agencies and international organizations operating in Yemen would contribute to reducing duplicative efforts. The Directory would serve several purposes, inter-alia, help identify:

- a) data gaps;
- b) over-lapping series and duplications;
- c) data collected but not used in publications.

Based on such identification, CSO should take steps to rationalize and eliminate series that no longer serve the nation’s needs. The Directory would also provide the basic building blocks for the preparation of the proposed Metadata Base as well as the database. Additionally, it would enable CSO to better inform users of what data sets are available and contribute to improved dissemination.

e. User Need Assessment

⁸ The United Nations Statistical Division has developed a model law for use by national governments. See Annex 8 for a reproduction of the law from the *UN Handbook on Statistical Organization*.

If CSO is to become more client oriented and better positioned to serve them, it needs to assess client needs. Any attempt to assess client needs must begin with the acceptance of the notion that its clients transcend governmental agencies. As markets begin to play a larger role in the functioning of the economy, private sector and civil society entities will emerge as important clients. Their needs will need to be factored in determining statistical priorities and in the design of “products” and dissemination policies. To this end, CSO should take steps to move away from its present rather aloof stance and actively engage in a dialogue with its potential clients.

f. Financial & Budget Management

With the proposed introduction of a system of Program Budgeting at the national level, CSO will need to introduce its own system of financial and budget management. Almost all advanced countries have effective systems in place to permit costing their activities based on time reporting and use of other resources. CSO should move towards introduction of such systems into its management processes. It is suggested that during the first year of the Project four activities be carried out: a) a workshop to expose all managers on the scope, content, operation of an effective financial management system and the benefits thereof; b) train key staff; c) with the assistance of a consultant design, test and launch a pilot exercise d) Based on the experience gained, make plans for the launch of the system to all branches of CSO in the second year of the Project.

g. Human Resource Management

Parallel to work under the above activity CSO should embark on the introduction of new practices for human resource management. Two core activities should be the introduction of staff time reporting, and a system of staff performance appraisals. A classification of tasks carried out in the various branches of CSO will be needed. Additionally, a system for assessing staff performance incorporating reporting forms, the criteria for assessments, and training of managers in the use of the system should be put in place.

h. Statistics in a Market Economy

Given that there is yet an inadequate appreciation of the nature of a market economy and the role data plays in such an economy in decision making processes in both the public and private sector, it is important to expose both data producers and users to key aspects. To this end it is proposed that workshops be conducted for staff from both CSO and the key agencies of the government. The workshops should cover the following themes:

- a. Contrast between decision making processes in a centrally planned and a market economy.
- b. Demarcation of the private and public sector roles in decision making.
- c. A brief discussion of the analytical framework of the SNA as the center piece to data organization.
- d. Importance of dissemination and openness whilst recognizing the need for protecting individual records, and

- e. Scope of the current project and its goals. These workshops should be viewed as educative and designed to reorient participants who would be middle level managers and professional staff.

i. Statistical Organization

The workshop for all middle level CSO managers would have a two fold goal :

- A. to provide participants an understanding of the goals, modalities and programs to be conducted under the Project and to gain support for institutional and organizational change, and;
- B. to seek inputs and feedback.

The stress would be to create an environment for change and promote ownership of the project. The process should contribute to a deepening of the managerial team.

Most of the activities identified above are to be undertaken in the first year of the project in order to create an appropriate environment in which the core activities associated with data development and dissemination can be executed. The planned activities will seek to involve the active participation of all major stakeholders, both producers and users of data.

Benefits and outcomes

The activities under the component will:

- (i) provide exposure to the CSO management and staff to best practices;
- (ii) give the stakeholders better understanding role of Statistical Systems in market economies;
- (iii) establish needs of all stakeholders;
- (iv) put in place budgeting and financial management systems geared to Program Budgeting;
- (v) establish comprehensive a Human Resource system;
- (vi) refine organizational structure of the CSO;
- (vii) create an appropriate climate for change.

2.6 A Program for Data Development

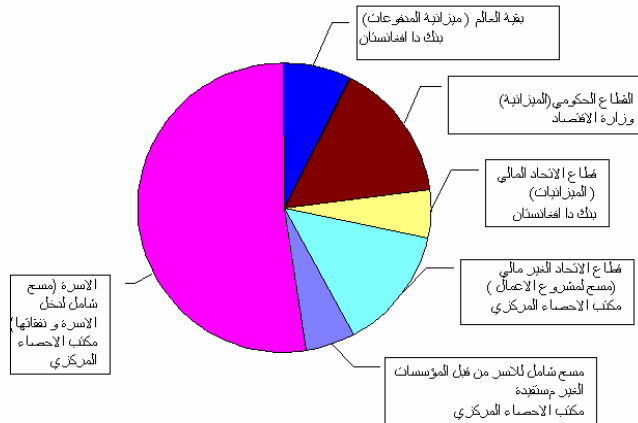
Introduction

Data development to fill existing information gaps and meet stakeholder needs represents the single most important and challenging activity to be taken up in the context of a strategic plan for statistical development. The activities in this cluster represent the core activities to be mounted in relation to data collection. The activities to be pursued represent the consolidated work programs for all components of the statistical system that includes the CSO and other agencies and entities. The work program embraces both modifications to existing data collection and the launch of new programs.

The integrated statistical work program builds upon two essential frameworks. These are the 1993 System of National Accounts (SNA) which offers a broad framework for organizing the range of economic statistics and the MDG framework for organizing the compilation of social statistics. The importance of the Census of population in this context cannot be minimized. It will provide a baseline for the key demographic and social variables and will fill large gaps in information that seriously impede decision making. In addition, the Census will make a large and significant contribution to capacity building. Foremost amongst these contributions is the large investment being made to develop the physical infrastructure of CSO. Under the Census program, CSO will receive sizable amounts of equipment (vehicles and IT equipment), training of staff in census methods, cartography, and use of IT. A direct output from the first phase listing of households and the related mapping of localities will lead to the creation of an up to date household sampling frame, critically needed for the design and execution of household surveys. Taken together, the investments in both the physical and statistical infrastructure of CSO will lay the foundations for collection and compilation of data highlighted in this document.

The work on economic statistics needs to be conducted within an organizing framework. The 1993 SNA provides such a framework. Based on the SNA categorization of institutional sectors, statistical collections can be appropriately organized. For estimating the **Government sector's contribution** to GDP, the revenue/expenditure and development budgets of the government represent the primary data source. For the **Non- Financial Corporate sector** made up of all incorporated business, irrespective of size and type of sector activity, most countries obtain the data either from tax returns or by canvassing special surveys of enterprises. The data for the **Corporate Financial Sector** are generally obtained from statutory returns filed with the Central Bank. For estimating the contribution or share of **Households** to GDP, most countries rely upon a combination of tax records and household surveys of income expenditure. The **Rest of the World Accounts** are based on the balance of payments compiled from a combination of data from administrative records and special surveys. A graphical presentation of the SNA framework, along with areas of responsibility for different agencies, is depicted below.

The System of National Accounts Framework for Allocating Data Responsibilities (SNA 1993)



It must however be emphasized that the framework presented above does not take account of the social, demographic and other data sets that are needed. To meet these needs, separate collection arrangements need to be established. For most **demographic statistics**, the data can be obtained from the decennial census of population and vital registration records. **Social statistics** – health, education, welfare, and living conditions -can for the most part be derived from administrative records supplemented by survey data. The framework for these is provided by the MDG. The 48 key indicators encompassed by the MDG⁹ represent the core social and poverty related indicators that have been accepted at the international level for monitoring progress. Much of the information for compiling the MDG indicators will be based on administrative records; other information, especially that pertaining to poverty will need to be collected through household inquiries. The Household Income Expenditure Survey can be the main vehicle for collecting such data. Collecting **Labor market information**, vital to measurement of trends in employment and unemployment and hours worked, requires special surveys.

In order to reduce the data collection burden on both the CSO and respondents, and based on the strategy outlined earlier, it is desirable to develop a compact program of surveys and arrangements for tapping administrative records to satisfy the major data needs of the nation.

⁹ See Annex for a listing of the MDG. In the context of Yemen in the near term, not all of these indicators are likely to be compiled.

As noted earlier, the compilation of national accounts demands the availability of basic data. Based on these considerations, and a review of the current capacity of CSO, any future work program needs to be cost effective. The suggested program of work now being put forward attempts to take an integrated approach; it aims to maximize the potential role of other agencies of the Government in generating data and supporting CSO. The task of building a credible system of economic and social statistics should be as a national task requiring co-operative efforts. The overall work program that emerges, while still large, attempts to deal with resource issues and implementation capacity given the existing levels of staff.

Needed surveys and administrative data

The consolidation of the survey program can be achieved through the launch of the following surveys:

- An **Integrated Business Enterprise Survey (IBES)** to collect information from enterprises.
- A **Household Income and Expenditure Survey**.
- A quarterly **Production Survey**
- Monthly **Survey of Prices**

Presented below are the activities associated with core programs in economic and social statistics. Data Development

	ACTIVITIES	INPUTS	OUTCOMES
A. Household Sample Surveys			
A.1 - Household Income-Expenditure Survey	Workshop; create & test new modules; improve methods of data validation, processing and imputations; upgrade sampling 3 workshops	4 consultants – 12 weeks x 4 visits; 1 local consultant - 12 weeks; Software and equipment	HIES to better meet needs of SNA; map survey outputs to NA; weights for CPI
A.2 - Upgrade analytical capacity of staff	Workshop, create & test new modules; improve methods of data validation, processing and imputations; upgrade sampling and analysis	1 Consultant – 6 weeks 2 Consultants – 8 weeks x 2 visits 1 local consultant - 8 weeks. Software and equipment	Deepen use of data in poverty analysis etc Improved data and analytical capacity
A.3 - Survey Skills Program	a) Initial Training in Canada b) Launch program c) Developing training materials	4 staff for 6 weeks 3 consultants – 8 weeks x 2 visits; 2 local consultants - 10 weeks Software and equipment	Sustained capacity at CSO to train middle level professional staff in all aspects of survey operations
A.4 - Training in sampling	Foreign Training	3 staff for 6 week programs	In-house expertise in sampling techniques
B. Enterprise Statistics			
B.1 - Enterprise versus establishment statistics	Introductory workshop	1 consultant – 2 weeks	Increased knowledge on role and use of these surveys.
B.2 - Integrated Business Enterprise Survey	Project prep; design, test and operationalize new survey	1 consultant – 18 weeks x 4 visits 1 local consultant - 18 weeks. Software and equipment. Translation of documents.	Capacity to carry out IBES; map data to NA, BOP; produce inst. Sector accounts and comprehensive enterprise stats.
B.3 - Analytical Use of Enterprise Data in National Accounts, Balance of Payment, and External Debt	2 Workshops	2 consultants - 6 weeks x 3 visits	Effective use of IBES data
B.4 - Sampling in enterprise	a) Foreign training	a) 3 staff for 4	Capacity to develop and execute

surveys	b) Workshop	weeks b) 2 consultants - 3 weeks.	sample surveys of enterprises
B.5 - Development of manuals		1 consultant – 6 weeks 2 local consultant - 12 weeks	Manuals available to guide survey operations

C. Surveys of Economic Activity

C.1 - Monthly/Quarterly Surveys of Large Enterprises in (i) Agriculture; (ii) Manufacturing, (iii) Retail-Wholesale, and (iv) Transport	Workshops, project preparation; design, test and operationalize new survey 4	4 3 consultant –12 weeks X 1 visit 4 local consultants - 16 weeks Equipment and software. Translation of documents.	Comprehensive statistics on current activity in key sectors. Revised survey will track business trends and improved forecasts. New indices to aid forecasting. Improved measures of short-term economic activity.
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D. Price Statistics

D.1 - General Introduction to Price Statistics	Workshop	1 consultant –2 weeks	Increased knowledge on role of prices and methods
D.2 - Consumer Price Indices	Project Prep; workshops, specification & selection of items, weights and outlets; computation methods and documentation	1 consultant –12 weeks x 3 visits 2 local consultants –16 weeks Equipment and software	More robust CPI
D.3 - Producer Price Indices	As above	1 consultant –12 weeks x 3 Visits 2 local consultants –16 weeks. Equipment and software.	New indices in place
D.4 - Import & Export Price Indices	As above	1 consultant –6 weeks x 2 visits 1 local consultant - 8 weeks	New indices in place

E. Financial & Monetary Statistics

Note: These activities will involve the MoF & CBY)

E.1 - Banking & Monetary Statistics	Training	2 staff for foreign training -6 weeks	Trained staff at CSO & CBY
E.2 - Survey of Financial Institutions	Project Prep; workshops, specification and design of survey, test and operationalize; documentation	1 consultant –8 weeks X 3 visits 1 local consultant – 10 weeks Equipment and software	Survey to yield data for preparation of inst. Sector accounts
E.3 - Government Finance Statistics	Training	2 staff for foreign training - 6 weeks	Trained staff at MoF and CSO
E.4 - Public and Private External Debt Statistics	Project Prep; workshops, design system; documentation	1 consultant –8 weeks X 2 visits 1 local consultant – 10 weeks. Equipment and software.	A debt reporting system in place

F. External Trade & BoP

F.1 - Balance of Payments	Training	2 staff for foreign training x 6weeks	Trained staff at CSO & CBY
F.2 - Special Problems in trade data compilation	Identify issues and use expert inputs	1 consultant – 6 weeks	Improved trade data

G. National Accounts

G.1 - Overview of SNA 1993	2 Workshops	1 consultant –3 weeks	Improved knowledge of SNA
G.2 - Supply & Use Accounts	1 Workshop; development	1 consultant – 12 weeksx3	Revised accounts using new data
G.3 - Institutional Sector Accounts	1 Workshop, development	1 consultant –12 weeks x 3 Visits	Inst. Sector accounts completed
G.4 - Deflators	1 Workshop; development	1 consultant –6 weeks x 2 Visits	Revised deflators
G.5 - Special areas and issues (to be defined)	Identification of issues; Consulting inputs and tests	1 consultant- 6 weeks	Complex computation issues resolved
G.6 – Use of National Accounts	Workshop application		Improved capacity in use of NA in analysis

H. Population Census

The UNFPA played a major role in supporting the Government of Yemen in planning and implementing the 1994 Census. This time around it will be very much a national effort. CSO hopes to draw on its accumulated experience, skills and knowledge base in the execution of the 2004 Census. The G of Y has allocated 1.4 billion Yemeni Riyals (about US\$ 7.7 million) to conduct the Census. But this is not felt to be adequate. The minimum budget needed is estimated to be 6.087 billion Yemeni Riyals or US\$ 34.5 million. There are no plans to approach the donor community to support this major initiative.

H.1 – Geographic (cartographic) preparations First Phase Listing and Processing

- a) Village profiles and maps
- b) House listings and sample frame.

H.2 – Preliminary Count

- a) Count of the overall population by jurisdictions and localities
- b) Population data based on sample of 1 in 200 households

H.3 - Full Enumeration

Detailed population data

H.4 - Data Input and Analysis

- a) Trained census and IT staff
- b) Establishment of computer center
- c) Baseline demographic indicators
- d) Census database

I. Demographic Analysis

I.1 - Improvement of current population estimates	Identification of issues; Consulting inputs and tests	1 consultant – 6 weeks 2 local consultants - 6 weeks	More robust estimates of population with data on migration
I.2 - Use of Census Data in small area database	As above	As above	Database on small area population statistics

J. Social Statistics

J.1 - Overview of social statistics	Workshop	2 Consultants – 2weeks	Enhanced know-how on international recommendations; MDGs
J.2 - Use of administrative data	Workshop, development and application	1 Consultant –12 weeks x 3 visits	Incorporate int. classifications, arrange for better data flows in line Ministries and data flows from other agencies; redesign forms
J.3 - Social Statistics for small areas	Development and application	1 Consultant – 12 weeks x 3 visits	Database for small areas in place; gender statistics

A. Household Sample Surveys

A.1 - Household Income Expenditure Survey

As noted earlier, a cluster of economic activities are anchored at the household level. The 1993 SNA addresses this issue in part through the institutional sectoring arrangements. It is therefore suggested that small-scale manufacturing, service and agricultural activities conducted at the household level be captured systematically through household inquiries. The Household Income and Expenditure Survey, requires a design to incorporate full accounting of both non-farm and agricultural production activities. It is further suggested that a modular structure would permit the incorporation of other information on topics of interest from a policy viewpoint. If appropriately designed, the HIES could generate a large part of the data needed for preparation of the household institutional sector national accounts, measurement of poverty and living standards, calculation of household consumption, and weights for the CPI. Information collected through the modules would provide both wage data and earnings from business, agricultural and other secondary activities. Other modules could include crop production and labor activities. Separate modules on demographic characteristics, health and nutrition, for instance, could also be considered for canvassing at less frequent intervals on a rotational basis. These and other modules, reflecting emerging priorities could generate adequate measures of social changes and permit poverty monitoring. The HIES could be integrated with a community level survey to aid analysis. There is a case for a sample size to provide better estimates for the main aggregates at the Governorate level. However, in the first instance the survey should be so designed that it yields reliable national level estimates.

The HIES is a complex and costly survey undertaking. It should be planned for execution at approximately three yearly intervals. For the in between years there will be need for a more limited survey that attempts to collect a narrower range of information based on proxy indicators.

The HIES presents a high priority activity. A well executed HIES will generate data for estimating private household consumption in the context of GDP estimation; it will provide weights for the CPI and the basis for poverty analysis. Additional modules will enable the collection of information for the compilation of some key social indicators.

A.2 - Upgrade analytical capacity of staff

The first of three workshops should be organized. The workshop should deal in particular with methods for imputing values for missing data, data presentation, use of statistical methods for assessing data quality, and calculation of derived measures.

A.3 - Survey Skills Program

The practical program offered by Statistics Canada for training professional staff in all aspects of survey operations from design, execution to analysis is highly rated and valued by other statistical offices globally. Several Central European countries have taken advantage of the program offered by Statistics Canada. The approach calls for a team of three staff to participate in the six-week program in Ottawa. Following the completion of the training in Ottawa, the staff members with Canadian experts assisting, run a comparable program in their home country. The program is then institutionalized in the Training Institute or Center of the recipient country there by contributing to long term and sustainable capacity building. CSO should negotiate a program with Statistics Canada and send three staff members to be trained in Canada in the course of the first year of the current Project. The launch of the domestic part of the program should be taken up in the second year.

A.4 - Training in Sampling

The objective is to train a core professional group in sampling applications. The core group would ultimately be responsible for the design of all sample surveys. No activity is planned in Year one.

B. Enterprise Statistics

B.1 - Enterprise versus Establishment Statistics

Current ambiguity about the establishment and enterprise statistics impacts on the work program of CSO. Given the SNA emphasis on institutional sectoring as a basis, it is imperative that there is clear understanding of the nature of the two approaches. To this end, a workshop should be held to clarify the essential differences and the implications that arise from adoption of one or the other approaches. The workshop should take up the basic concepts, the implications for data availability for small areas, the emphasis and role of commercial accounting standards in enterprise surveys, and survey as an introduction to the adoption of the IBES has a comprehensive tool for data collection. The workshop should thus be designed to provide an initial introduction towards the introduction of the IBES, serving a multiplicity of data objectives in the national accounts, BOP, financial data, and private sector area.

B.2 - Integrated Business Enterprise Survey

The IBES should be designed and launched as an annual survey to replace the existing data collection from establishments. It should be designed to collect relevant data for compilation not only of the National Accounts, but provide information for the estimation of the Balance of Payments, private capital flows and investment indicators. The introduction of commercial accounting standards should facilitate reporting by enterprises. The survey should cover all enterprises, irrespective of sector of operations, and should be modular in structure, covering the full set of financial accounts appropriately disaggregated to support the national accounts compilations. Other appropriate modules to obtain output information, employment and wage data, should accompany the main form.

The problems associated with the collection of data from a large number of small establishments (un-incorporated businesses) with poor business records

would be overcome without much loss of information. These largely household based activities, conventionally covered through establishment surveys, could be covered through the new HIES, discussed below. The second point to note is that the survey would be multi-sectoral and therefore capture activities that are currently not covered by on-going sector specific surveys. Thirdly, the scope of the survey, in terms of the number of units covered, will be manageable if all large enterprises above a certain size cut-off are covered on a 100% basis while the smaller enterprises are surveyed through a sample. The IBES would lead to the elimination of a number of the current industry and business surveys that no longer provide relevant data.

The IBES should be seen as one of the key instruments for collecting data from enterprises for purposes of the national accounts, the BOP, and other data needed for monitoring economic trends in the non-financial corporate sector, consolidating a number of current surveys, and generally improving the availability of data on the private sector. In moving towards the goal of launching of the IBES, the first step entails the design of the survey involving coverage, the questionnaire, and obtaining support of major respondents. It is therefore proposed that these activities be pursued and the questionnaire tested and evaluated in the course of the first year of the Project.

B.3 - Analytical use of enterprise data in National Accounts, Balance of Payments, and External Debt

Enterprise data collected through the IBES will result in the availability of a rich body of data. The data will provide the basis for compilation of many of the components items in the national accounts and the BoP. Staff will be trained in the use of the data and to map the data into the economic accounts. No activity is planned in Year 1.

B.4 - Sampling in Enterprise Surveys

The IBES or for that matter other enterprise surveys conducted by CSO will need to consider a strategy that calls for full coverage of large enterprises and a system of sampling of medium and small sized enterprises. CSO has limited know-how in the use of sampling in the area of enterprises. A workshop that explores best practice in other countries and its applicability in Yemen should be conducted to expose staff to the opportunities and potential for using sampling. The workshop should also deal with basic methodological issues in the area of sampling enterprises.

B.5 - Development of Manuals

Documentation of procedures employed in statistical operations is essential for two broad purposes. Firstly, the documentation will represent a specification of the processes and approaches that will be used and thus serve as a guide and a reference source. Secondly, systematic organization of the assembled material will become a training aid. No activity is planned for Year 1.

C. Surveys of Economic Activity

C.1 - Monthly and Quarterly Surveys of Large Enterprises in (i) Agriculture; (ii) Manufacturing, (iii) Retail-Wholesale, and (iv) Transport

Presently a number of sectoral surveys are conducted by CSO. To achieve the goal to consolidate the number of surveys and eliminate the collection of data less than relevant to current needs, a complete redesign and rationalization is called for. As a first step, a workshop to explore optimal arrangements for sampling, a modified questionnaire with common features, emphasis on data needed for the compilation of indices of production and providing a basis for the estimation of quarterly national accounts is imperative. Following the workshop, work should begin in designing a new survey program to replace existing surveys. The new program would need to have linkages to the IBES.

Agricultural Statistics

The Ministry of Agriculture, through its network of extension workers collects a range of information on area cultivated, harvested and reported output. The Ministry is being assisted by FAO to upgrade the quality of data collected. The small statistical cell in the Ministry is poorly staffed and inadequately equipped. As a matter of priority, the capacity of this unit will need to be upgraded through training and the installation of IT equipment. The CSO, for its part, needs to develop stronger interactions with the Ministry. These interactions should center round specification of classifications, standards and obtaining regular access to the data generated by the Ministry.

Other Surveys

Many small sectoral surveys are currently undertaken by CSO. These surveys should be carefully reviewed and action taken to eliminate those that do not yield policy relevant data or those that have outlived their usefulness. These surveys should be replaced by the proposed Monthly Survey of Economic Activity.

Indices of Production: No indices are currently compiled. With improved data availability and fuller coverage of production, new indices will be developed. These would track short term trends in the level of economic activity in the key sectors of the economy.

The IBES questionnaires could be simplified and used for the new consolidated survey, which could be named the Monthly Survey of Economic Activity. The survey, if appropriately designed, would generate data sets for measurement of production trends, calculation of monthly indices of production, wage trends, etc.

D. Price Statistics

The area of price statistics requires special attention. Considerable more work is needed in developing an integrated work program on price statistics that would provide a basis for the calculation of appropriate deflators, track price developments in the economy, and provide policy makers with the tools to address future inflationary pressures as they emerge.

An appropriate framework for price statistics should encompass consumer prices, producer prices, and import/export prices. CSO compiles a Consumer Price Index for the national capital Sana'a and all of the capitals of the Governorates. However, fresh weights are needed. These are unlikely to be available until a household expenditure survey has been carried out in 2005.

Current work on the collection of producer prices is somewhat disjointed. The Ministry of Agriculture collects some prices for the major crops. No systematic collection of industrial, transport or construction products is carried. In cooperation with the Ministry of Agriculture, CSO needs to develop price collections with the goal of calculating a well-based Producer Price Index with appropriate sub-indices for the main branches of production. Such disaggregated indices should serve as deflators.

The need for import/export price indices is clearly evident. Indices in this area should be based on actual price collections rather than unit values.

It is widely recognized that unit values are highly volatile in part because of the lack of homogeneity of items imported or exported. Therefore, a system for collecting actual import and export prices needs to be developed.

In the longer term, as experience is gained and a core capacity comes into being, CSO will need to initiate work on the compilation of special price series that are geared to the calculation of purchasing power parities in the context of the International Comparisons Project. However, work in this area will need to be deferred until a point in time when disaggregated GDP estimates are available.

D.1 - General Introduction to Price Statistics

Although CSO has, with some external assistance, embarked upon a development of price statistics, there is as yet no integrated framework in place to pursue the compilation of a comprehensive set of price indices at the producer, consumer and trade level. Nor is the current work linked to deflation of the major macro aggregates.

Before launching activities in the price area, it is important that staff be exposed to the integrated nature of prices, best practice employed by market economies in measuring prices and compiling indices. Key methodological issues in price statistics need to be understood e.g. base weighted versus current based indices, importance of outlet selection, commodity specifications. To this end, a workshop highlighting these issues should be organized in Year 1 of the project as a prelude to work on specific indices.

D.2 - Consumer Price Indices

Two main activities should be pursued:

In Year 1 a workshop dealing with the various technical and methodological issues involving the calculation of a CPI, and,

Secondly, the development and testing new commodity specifications, more efficient sampling of outlets, and the calculation of weights based on the HES patterns of expenditure taking account of imputations for own account consumption should be organized.

D.3 - Producer Price Indices

CSO does not currently compile such indices. Based on monthly and quarterly data collected by other agencies, it would be feasible to compute such indices. However, the underlying data are weak and unsystematically collected. With improved data availability and fuller coverage, the initial indices could be revised.

The indices will measure price trends more comprehensively and contribute to improved deflation of the national accounts. No activity is planned for Year 1.

D.4 - Import and Export Price Indices:

This will be largely a new activity designed to be a better measure of price trends covering external trade.

E. Financial & Monetary Statistics

E.1 - Banking & Monetary Statistics

The primary responsibility for compiling banking and monetary statistics rests with the central bank. It collects a range of data but its capacity will need to be further developed.

CSO is an important user of the data, especially in the compilation of the economic accounts of the nation. It is important that there is trained staff at both the central bank and at CSO.

To this end, staff members of both institutions should receive training at the IMF in Washington DC. CBY's computing facilities need to be further upgraded. CBY may benefit by creating a modest sized Statistics Department with responsibility for the collection and management of all data pertaining to money, banking, exchange rates, and the balance of payments. Given that these statistics are critically needed for the estimation of the national accounts by the CSO, there is a need to establish close working relationships between the CBY and the CSO. Conversely, CBY is dependent on the CSO for a whole host of data sets on production, prices, corporate finances etc. It is therefore important to develop mutually reinforcing relationships that permit the free flow and exchange of data.

E.2 - Survey of Financial Institutions:

No activity is planned in Year 1.

E.3 - Government Finance Statistics

As in the case of banking statistics, the CSO is an important user of government finance data, while the Ministry of Finance is the compiler of such data.

To this end staff from both the Ministry and CSO should be beneficiaries of IMF courses. No other activities are scheduled for Year 1.

E.4 - Public and Private External Debt Statistics

Public debt data are compiled by the Ministry of Finance. The Ministry will be assisted in developing an improved data base. Some data are assembled by the central bank on private debt. The IBES will aid in the collection of more comprehensive data and lead to the preparation of more complete information on both the stock of private debt and flows. No activity is planned in Year 1.

F. External Trade and Balance of Payments

F.1 - Balance of Payments

CSO will continue to share responsibility with the central bank for compilation of the Bop. A member of the CSO staff should be enrolled in the IMF BoP course.

F.2 - Special Problems in Trade Data Compilation

The introduction of the ASCUDA system will lead to a quantum improvement in the quality and range of trade statistics. Hence, a number of the current problems faced are likely to be overcome. To handle any residual issues, provision has been made for the services of a short-term consultant.

G. National Accounts

G.1 - Overview of SNA 1993

Although some staff in the National Accounts department of CSO have been trained in the basic methodology of the SNA, staff in other parts of CSO lack familiarity with the SNA framework. Staff in the major user agencies is even less familiar and are still grounded in the MPS and 1968 SNA system. Such unfamiliarity on the part of users' impacts on demands made for data and affects the quality of analysis.

Furthermore, given the nature of the SNA as an organizing framework for data collection, it is important that staff at CSO (not directly involved in compiling the national accounts) and staff at other important agencies is exposed to the key features of the SNA. A workshop, repeated, for the widest possible group of participants should be organized at an early date.

G.2 - Supply and Use Accounts

Although CSO is attempting to adapt the methodology for compiling supply and use tables, staff faces many practical issues connected with data availability. A proposed workshop should be designed to identify issues, such as:

1. The need for new data to improve weak areas in the accounts, and:
2. The appropriate estimation procedures, and:
3. The Resolution of other outstanding issues..

The outcome of the workshop would permit the establishment of a step-by-by approach to improving the existing supply and use tables.

G.3 - Institutional Sector Accounts

Although the institutional sector accounts represent a critical component of the SNA, progress in the compilation of such accounts must await the availability of new data.

Since no new data are likely to be available in Year 1 of the Project, no activities can be planned for the compilation of such accounts.

G.4 - Deflators

For the calculation of constant price GDP estimates a set of deflators are essential. Available¹⁰ deflators are weak and there are many unresolved practical issues.

As a first step towards bring about improvements, it is proposed that a workshop with an orientation similar to that for supply and use accounts be organized with the goal of establishing a step-by-step approach to introducing improvements.

H. Population Census

Plans for the Census of Population and Housing have an important bearing on the development of a statistical system in Yemen for a number of reasons. The census should be seen as part of a larger and more comprehensive strategy for developing the statistical system of Yemen.

Census related activities are likely to be the top priority for the CSO and impact on its ability to discharge its responsibilities in respect of other data gathering to meet the broader statistical needs of the government.

General training in project planning, for instance will greatly upgrade CSO capabilities in financial and human resource management. The hardware and equipment made available will go a long way in enhancing the physical infrastructure at CSO. Taken together, these inputs will make a sizable contribution to the physical capacity of CSO.

The census listings will enable CSO to develop a household sample frame. The frame will make a critical contribution to enhancing the statistical infrastructure and it will provide a basis for carrying out household surveys.

For these reasons, it is pertinent to briefly review the planned Census operations.

The Census is expected to be implemented in three stages: preparatory activities, enumeration and post enumeration activities.

10 See paper by Silke Stapel, "Enlargement and Exhaustiveness: the Eurostat Pilot Project with the EU Candidate Countries", presented at the OECD Joint Workshop on Measurement of the Non-observed Economy, October 16-20, 2000 - see <http://www.oecd.org/std/DNM/>, meetings, Joint Workshop.

The Preparatory stage includes the mapping and cartographic work such as updating the administrative divisions and maps to reflect the most recent changes and identifying large census enumeration areas and sub dividing them into manageable sizes suitable for census data collection.

This phase also includes the listing activities, such as the listing of housing units and households and the total number of household members.

The Enumeration phase represents the key phase of census activity and involves the recruitment of enumerators, training them, and the actual enumeration from the 17th to the 20th of December 2004.

At its peak the Census is expected to employ some 21651 enumerators, with 5014 team leaders, 646 District Managers, 66 supervisors and assistant supervisors. This will also be the phase at which preliminary census results will be published, on or about April 2005.

The Census will not be using sampling and will be a hundred percent coverage of the total population on all of the questions, expected to be 96 items of information. This will include: administrative-division data, demographic details, durable goods, general data, disability data, marital status data, education data, economic data, fertility information, and mortality data.

Even though CSO has some experience with Census operations, it is likely to present major challenges to both the CSO and the administration as a whole. The sheer logistics of such an undertaking can be formidable and will demand careful and close management. CSO capacities will be severely tested, and – under such conditions- foreign support, whether material or technical, becomes a necessity.

The Census has been designed to collect a large amount of data and may suffer from a degree of overloading. This in part accounts for the cost of the operation. CSO officials acknowledge that the inclusion of a large number of questions was in response to requests and pressures from a variety of data users, particularly to generate small area data, and reluctance to fall back on sampling because of a lack of understanding and experience with sampling methods. There appears to be less than a full appreciation that data quality may be compromised by an overloading of the questionnaire and the strain of training a large body of enumerators.

These concerns were shared with CSO management by the team. However, given that Census plans are at an advanced stage, it would be difficult to revise these plans at this stage and resort to either a scaling back or to use an approach that would use a shortened “core” questionnaire supplemented by say a 10 percent small which would utilize a longer questionnaire.

In costing the SMP, the costs of the Census have been notionally identified on the basis of CSO estimates. However, these costs have not been included in the aggregate costs of the SMP as the Government proposes to largely fund the Census from its own resources. USAID has agreed to provide approximately \$1 million to cover staff training and some advisory services.

I. Demographic Analysis

I.1 - Improvement of Current Population Estimates

Estimates of current population are based on the 1994 Census of Population and other demographic surveys and assumptions about events. The planned 2004 Census will provide new baseline estimates of the population.

Together with data from the recent demographic surveys, new parameters should be calculated to permit the preparation of annual estimates of population.

I.2 - Use of Census Data in Small Area Database

The 2004 Population census will generate a wealth of information and provide a basis for creating a database for small areas. The design of such a database, taking into account user needs, should commence early. A consultant should develop detailed proposals.

I.3 - General Demographic Analysis

Demographic statistics underpin many social indicators. Based on the Population Census and improved data flows from household surveys, CSO will be better placed to embark upon more analysis of demographic trends covering internal migration, fertility, morbidity and other demographic variables. No activities are scheduled for Year 1.

J. Social Statistics

J.1 - Overview of Social Statistics

A workshop for both CSO and other agency staff to take stock of existing social statistics and identify gaps and weaknesses should be a launching activity. The workshop should help in raising the level of cooperation between the agencies and enable discussion of classifications in use.

An external consultant would act as moderator and help in developing a framework for social statistics that incorporates the use of survey data to supplement administrative records.

Special attention will need to be extended to the generation of data on the status of women and the disabled as these constitute groups that are especially vulnerable in the context of current social conditions in Yemen.

J.2 - Use of Administrative Data

A second workshop would be organized to follow up on the issues taken up under J1.

A key issue taken up would be the introduction of international classifications, appropriately modified, and their harmonization and use across various agencies. The workshop should also take up the arrangements for greater data sharing between agencies and identify procedures for reconciling conflicting estimates.

Another key element of the work will relate to the compilation of the indicators encompassed by the MDGs.

Several of the line ministries lack know how and facilities to discharge their responsibilities. Their capacities will need to be enhanced through sustained training of staff and the installation of appropriate IT facilities.

J.3 - Social Statistics for Small Areas

Need for social statistics for small areas is unlikely to be met fully by the household surveys envisaged under this project. Yet there is a clear demand for such statistics. Meeting this need will demand a more orderly exploitation of administration records and registers. No activity is planned in Year 1.

J.4 - Social Indicators for Poverty Analysis

Another key element of the work will relate to the compilation of the indicators encompassed by the MDGs. The HIES and other household surveys

will be the primary sources of data for poverty analysis using well tested analytical frameworks as recommended by the World Bank.

As poverty alleviation will undoubtedly be an over arching policy goal, the development of a capacity to undertake poverty assessments will be essential.

CSO will need to work with other agencies, domestic and external, in estimating poverty lines and the preparation of poverty profiles. However, such analytical work will have to await the availability of data from the planned HIES. No activity is planned for Year 1.

Administrative Data

Statistical systems in most countries rely on administrative data sources to a considerable extent. The areas primarily relate to data on external trade, based on Customs records, public finance data, based on Government revenue/expenditure accounts, banking statistics, and a whole range of social statistics based on use of and access to public facilities in sectors such as health, education, and welfare services.

The challenges are how best to ensure that the data available conform to established international classifications and definitions. The central statistical agency in most countries faces a major challenge and needs to work in harmony and in cooperation with the various agencies responsible for maintaining these administrative records.

In the Yemen context, the challenge is even greater because the agencies lack resources, adequate administrative systems and know how. Under these circumstances, the CSO needs to engage these agencies in a variety of ways:

1. Identify data needs,
2. Work towards acceptance and implementation of standard classifications;
3. Arrange for smooth flows of data on a timely basis, and:
4. Train the staff of the other agencies in an appropriate manner.

As a first step, CSO needs to carefully identify its requirements, engage the agencies involved, and help train staff. Under the scope of the current plan, provision is made to strengthen the existing statistical cells in key line Ministries (Health Education, Commerce etc) where they exist and the establishment of new units where none exist. These cells will need to be adequately staffed, with appropriate training and supported by the availability of equipment for data management.

Proposed outputs with targets

Three key issues merit stress:

- **Networking and data sharing:** Data needed for compilation of national accounts and other policy relevant indicators be obtained to the maximum extent possible through gaining access to data generated by administrative processes and maintained by other agencies;
- **Integrated Surveys** based on a carefully designed sample survey program that does not strain the capacity of the CSO.
- **Information Technology** will need to play an important role in overcoming the handicaps faced by the CSO.

The overall strategy should help develop networking arrangements with other key agencies such as the Ministries of Finance, other line ministries, and the CBY, and private sector associations through which a maximum effort to tap into existing information will need to be made. Wherever feasible, data transmission is done through electronic means, thus maximizing the use of information technology.

Other Policy Relevant Statistics and Indicators

The successful implementation of the program outlined above over the life span of the project will result in the flow of comprehensive statistics that are essential to support evidence based decision making in the context of the functioning of a market economy. These information flows should meet the needs of all major stakeholders made up of government entities, the private sector, international investors and agencies and civil society in general.

Special mention must be made of the role of line Ministries. Many of these are involved in data collection and data management functions. Much of the data are generated by administrative processes. These agencies have small statistical cells that are understaffed, who in most cases are not trained, under funded, poorly equipped, and insufficiently integrated into the statistical system.

In the scheme of things linked to data development, it will be vitally important to correct present limitations. Several actions will be needed:

An initial first step should be to review their current processes, methods and scales of operation. Based on the findings, new systems will need to be put in place. Staff will have to be trained and augmented where necessary; new equipment installed; new classifications introduced. The Ministries of Agriculture, Labor, Health, Education, and Commerce will need to be given priority attention.

Along with the upgrading of the capacity of the line ministries to engage in statistical work, as a second step, it is imperative that a full evaluation of ongoing statistical collections be undertaken in each of the line ministries. The review should be comprehensive in scope and include an assessment of all current operations, identify weaknesses in administrative procedures, classifications and concepts used, and record maintenance systems. The end objective should be to introduce modifications and/or the introduction of new systems that would yield improved statistics on the basis of administrative records.

Certain Ministries, while not engaged in data collection, are major data users with specialized responsibilities and interests. Their special needs will have to be accommodated by CSO and other data producing entities.

To enable these user Ministries to become informed and more efficient data users, key staff from these agencies will need to be trained in basic data manipulations and analysis. Therefore, staff from these Ministries will need to be included in appropriate training courses organized under the Data Development component of this program.

2.7 Investing in Statistical Infrastructure

A national statistical system needs to be supported by an adequate technical infrastructure represented by sampling frames, business registers, classification schemes etc. These constitute the technical infrastructure that needs to be in place for a statistical system to conduct surveys and censuses, set standards for components of the statistical system, lay the basis for effective data dissemination and achieve efficient use of resources.

Yemen's statistical system has had in the last few years some investment in these areas but other areas such as sampling frames and business registers are relatively weak. As it embarks on a program for revitalization of the system, it will need to invest in a number of critical areas: sampling frames, business registers, classification schemes etc. before it can embark on a serious program of data improvement and gap filling.

The component **Statistical infrastructure** embraces improvement of the basic elements of the statistical infrastructure referred to above. Four major sub-components are suggested.

Statistical Infrastructure

	ACTIVITIES	INPUTS	OUTCOMES
A.1 - Development of Household Sample Frame	Workshop; Project Prep; Pilot; Full implementation	1 Consultant – 8weeks.x 2 Visits 1 Local Consultant 12 weeks Equipment	Use Pop. Census data to create Master Sample Frame
A.2 - Enterprise Register	Project Prep; Training Development	1Consultant – 8 weeks 2 Visits 1 Local Consultant – 16 weeks Equipment	Establish a register and procedures for updating
A.3 - International Standards & Classifications	3 workshops; Adaptation	2 Consultants- 8weeksx 2 Visits 2 Local Cons- 16weeks Translation	Introduce new standards
A.4 - Support for user Interactions	Terms of reference and modalities	1 Consultant –3 weeks	Set up National Statistics Council

The activities to be pursued under this component of the project are identified below:

A.1 - Development of Household Sample Frame

The Phase I of the Population Census of 2004 (the listing phase) will provide a basis for the development of such a frame. Arrangements for the formalization of a sampling frame should begin with a workshop that would deal with the key features of a household sample survey frame focusing on the attributes of such a frame, procedures for creating a frame based on the census

of population, its updating, and cartographic requirements. Participants should include both CSO and AIMS officials. Following the workshop a detailed step-by-step work program should be developed. A pilot program for one province should be carried to provide a basis for a nation-wide frame, to be taken up in the second year of the Project.

A.2 - Enterprise Register

CSO has an outdated register based on old records which require updating. It needs to obtain the active cooperation of other administrative agencies (licensing authorities, taxation agencies, chambers of commerce etc) and put in place effective arrangements for updating the register. Staff of other agencies involved should be given basic training on the concepts and classifications employed in the preparation of the register.

A.3 - International Standards and Classifications

CSO needs to move towards the adoption of a number of global classification systems. Based on the progress, further work should be launched to introduce other pertinent classifications. As a first step, CSO should identify immediately prior to the launch of the Project a particular classification for adoption in the near term. Once so determined, a workshop should be organized. The main thrust of the workshop should be to acquaint participants with the underlying principles governing the classification, the structure of the classification the extent to which modifications are needed to suit Yemeni conditions and to develop a work plan.

It needs to be stressed that all new classifications and standards that are developed should be adopted as national standards and be used by all units in the national statistical system.

A.4 - Support for User Interactions

The need for effective coordination of the statistical system is urgent. To this end a National Statistical Council needs to be established. The Council should set statistical policy and determine priorities in a consultative and a participatory manner. In order to improve user interactions and create an ongoing dialogue with users, it is highly desirable that a number of user groups be established. It is suggested that CSO consider creating groups on a) national accounts; b) poverty; c) price statistics; d) labor statistics; e) enterprise statistics and f) social indicators. The composition of the groups, the terms of reference for each group, the modalities of how the groups would operate including the frequency of meetings should be established. It is further suggested that the relevant parts of the draft Directory of Statistical Outputs should be submitted to the Groups for consideration.

Benefits and outcomes

In terms of direct benefits, the broad goals of the activities are to achieve the following outcomes:

The availability of an effective and efficient household sample frame will directly lead to the ability to greatly improve the sample design of household surveys. Improved sampling will not only contribute to improvements in the

geographic coverage of surveys, but also result in effective coverage of all segments of the population. Once it is feasible to refine sample design, cost savings are likely through a reduction in sample sizes. These improvements will in turn lead to upgrading the quality of data, reducing the cost of data collection, and opening up new opportunities for conducting data collection. It should be noted that sample surveys will be key to measuring living standards, poverty monitoring, and tracking progress in the attainment of the MDG. Other data sets generated by sample surveys will provide users with information pertaining to labor market developments along with information on internal migration. In brief, improving the infrastructure for the conduct of household surveys is a key investment with wider ramifications for both the statistical system and for data users.

As noted elsewhere in this report, the present system of data collection with reliance on complete reporting is becoming untenable as the number of small enterprises/establishments increases under the process of reconstruction. CSO has neither the resources nor the capacity to continue with an outmoded approach that emphasizes complete reporting. It needs to move urgently to a system of enterprise/business surveys if it is to avoid becoming overwhelmed and if it is to improve the quality of information flows. Furthermore, it has to fall into step with international best practice. The conduct of effective and efficient surveys of businesses will demand the availability of an updated business register. Thus, the investment made in developing and updating a business register is critical to the emergence of a strong statistical system.

The adoption of international standards and classifications is important for three broad reasons. Firstly, they are an essential part of moving towards implementation of the 1993 SNA, compilation of the indicators incorporated in the MDG, and poverty measurement. Secondly, if the CSO is to meet its reporting obligations to international agencies, it has no real alternative to an adoption of the prescribed international classifications and standards. Thirdly, if in the medium term Yemen statistics are to become more comparable, (of importance to policy makers), the statistics compiled will need to be based on accepted global standards.

The establishment of a National Statistical Advisory Council will provide mechanisms for determining statistical policy, setting priorities and permit coordination. The proposed user groups will permit an ongoing dialogue between users and data producers.

2.8 Investment in Physical Infrastructure

Donors have provided CSO with modest amounts of computer hardware as part of their technical assistance. The equipment now available represents a modest investment and will constitute the basis for a new computing environment. Additional investments in hardware and will be required at both the HQ and Governorate level to handle the vastly increased workload envisaged under the current plan. A local area network (LAN) based architecture would best serve the needs of CSO.

Some data entry functions could be decentralized to the Governorates in stages. These offices will also need to be provided with transportation equipment in order to support field operations connected with an expanded survey program. For this purpose, it will be necessary to provide statistical units at the Governorate level with IT equipment.

As noted elsewhere, the Ministries responsible for compilation of data based on administrative records are inadequately equipped. It will therefore be necessary to make investments in IT equipment.

The above recommendations require some elaboration. The access to unit records at the HQ level represents best practice and is the norm in almost all statistical systems. It has several benefits. It provides professional staff with the ability to review all data, identify "outliers", make informed judgments and corrections, and take appropriate steps that contribute to data quality enhancement.

More importantly, the availability of unit records permits the creation of detailed databases that have detailed time series for the purposes of both cross-sectional and time series analysis.

CSO should adopt a policy that leads to such data being stored at the HQ level. With the setting up of Local Area Networks in the Operating Departments, it will be feasible to engage in greater data sharing. Each of the Operating Departments would need to have IT professionals to perform specialized functions. In the proposed IT environment, the need for customized systems and software would be largely eliminated. The Operating Departments would rely on commercial software. The role of the Computer Center under the scenario painted above would change. The Center would have responsibility for equipment maintenance, and providing IT training to staff in the other units of the CSO.

However, its major functions would be to develop and maintain the institutional database along with a Meta database. The proposals outlined above represent best practice in most statistical offices.

It must be stressed that most line Ministries and the CBY lack computing equipment are thus severely handicapped. Balanced development of the entire

statistical system will demand investments in hardware and software in the statistical units in these agencies. Concurrently, staff will require training.

Actions and timeframe

Six road clusters of activities and actions have been identified. They cover an initial comprehensive review of the IT requirements of CSO and development of a detailed design leading to the acquisition of hardware and software; establishment of a data - and metadata storage systems; establishment of an effective data dissemination capacity; ensuring data confidentiality and security; procurement of IT equipment; and upgrading skills of IT staff.

Investment in Physical Infrastructure and Equipment

	ACTIVITIES	INPUTS	OUTPUTS
A.1 - Detailed design of the IT System	The review would evaluate alternative IT strategies, develop guidelines, establish hardware/software requirements, training needs and formulate an overall program. Design and implement a database	3 Consultants – 4 weeks	Completion of Master plan for IT strategy; specifications for hardware
A.2 - Source data collection, processing and storage systems	Overall design	3 Consultants – 6 weeks x 2 Visits 4 Local Con – 6 weeks	New systems and processes in place
A.3 – Storage and dissemination of statistical output	Creation of an online database and Web access	2 Consultants – 8 weeks X 2 Visits 2 Local Consultants – 10 weeks	New database in place New meta database created and incorporated into database
A.4 - Ensuring data confidentiality and security	Creating new security processes	2 Consultants – 4 weeks X 1 visit 3 Local cons. 15 weeks	On line access to major users, data access policies established
A.5 - Technical infrastructure	Develop specs, tender documents, evaluation of bids; Place Orders for hardware and software IT & Transport Equipment	2 Consultants – 6 weeks US \$1,800,000 ¹¹	Place orders. Hardware in place along with new software in CSO and Other Agencies CSO
A.6 - Computerization and human resources	a) Study tours b) Local training	5 staff – 3 weeks Workshops – 2 Consultants – 6 weeks x 2 Visits	Trained staff in place
A.7 Construction of new office facilities	Construction of CSO branch offices in the governorates of: Taiz, Hodiedah, Ibb, Hadramout, Saa'dah Maintenance of the Aden office facility.		Finalizing the material infrastructure.

¹¹ Includes provision for line Ministries

A.1 - Development of a Detailed Design of the IT Improvements

Decisions about procurement and development of software and hardware facilities will be made on the basis of a *detailed design of the IT improvement strategy*, harmonized with various statistical development activities indicated in this document. This subcomponent assumes a general IT design to be developed.

A.2 - Source Data Collection, Processing and Storage Systems

This will include:

- Development of unified survey management systems including appropriate subsystems for primary data input, storage and processing, which could be customized to any questionnaire according to its description in the form of metadata;
- Introduction of electronic means of data collection;
- Development of electronic data exchange (EDI) technology for administrative data;
- Establishment of central database as well as data storage facilities for primary data upgrading of data processing software.
- Establishment of a system for meta-data storage and management.

A.3 - Storage and Dissemination of Statistical Output

The activities supplement and support implementation of the statistical data dissemination and users education strategy, which will be developed under sub-component A1, by establishing the necessary IT facilities, such as Unified output data- and metadata base with an on-line access, which would become a single source of information for various types of data

A.4 - Ensuring Data Confidentiality and Security

Activities will allow for the development of a general concept of confidentiality protection and statistical data security. The implementation will ensure protection of primary data and aggregated statistical information from partial or complete corruption or unauthorized access; and increase respondents' confidence in the statistical system.

A.5 - Technical Infrastructure

The sub-component deals with procurement and installation of ICT equipment to upgrade:

- Desktop hardware and software;
- Internal computer network;
- Database management and data processing systems;
- Security, archiving and confidentiality protection systems; and
- Data dissemination and exchange systems.

The equipment will include:

- (i) Communication equipment to establish local area networks at the headquarters level, as well as a corporate network, which will unite the local area networks and ensure synchronous access to the centrally

stored data and to applications based on client-server architecture, contained in the configuration of the distributed enterprise system.

- (ii) Server equipment to enable operation of a number of subsystems at central and regional levels: internal and external communications, data storage, processing and dissemination.
- (iii) Personal computers and printers.
- (iv) Other office equipment.

A.6 - Computerization and Human Resources

The activities under this sub-component enable the provision of specialized training to CSO staff, covering topics such as administration of local and corporate networks, databases, data storage and protection system, Internet technology, optical character recognition technology, hardware maintenance, etc. Training in application of modern information technology will be provided to the staff involved in data collection, processing, and dissemination, e.g. application of standard office packages, desktop publishing systems, statistical data analysis packages, database management systems, communication packages. Taking into account the number of staff to be trained, it is planned to develop electronic courses on a number of widely used technologies. It will enable conducting a portion of training remotely, therefore considerably cutting down the costs.

Benefits and outcomes

Information and communications technology provides the backbone for efficiency gains and quality improvements. Upgrading the IT capacity is a major component of the strategy of the overall reform program. Procurement and development decisions should be made in accordance with a single, coherent and up-to-date *IT Strategy*. This activity refers the development of such a strategy.

Desktop access to modern software is indispensable if staff is to be expected to implement the developments proposed in this strategy whilst continuing to conduct operations efficiently. In particular, proposals for streamlining regional office operations depend upon good computer access in the regional offices. Desktop hardware and software have not been upgraded for five years and are becoming seriously out of date. This activity envisages the procurement of desktop hardware and software in accordance with the IT Strategy.

The option of in-house development of data processing and storage systems is unsustainable in the present climate where IT experts are in short supply. The modern approach is to make increasing use of general purpose, off the shelf software, in particular statistical data process software that can readily interface with data held in data management systems. An aim of the project is to review and upgrade security, archiving and confidentiality protection systems to take into account the new systems and procedures and in the light of current best practice.

The introduction of a database will ensure that CSO data holdings are more visible, accessible and readily integrated. In the first instance the database will be accessible only within CSO. In the second phase selected data will be

available to users. The development of a Meta database will add greater transparency to the data and permit users to understand more fully the nature of the data.

Over the next five years electronic dissemination can be expected to become increasingly important, in particular dissemination through the Internet. To this end, a website will be developed with the twin objectives of increasing the data dissemination capabilities and of providing additional information to users.

2.9 Investment and Financing Plan

The basis of the estimates takes account of a review of current capacity and resource availability. The estimates have been built up on an assessment of the technical viability of proposed investment.

Past under investment in both physical and statistical infrastructure has left Yemen's statistical system in a relatively weak state. Current resource endowments are inadequate to permit the launch of a meaningful data improvement and enhanced dissemination program that is justified for a country at this stage of statistical development.

The proposals presented in this plan are technically sound and take account of experience in other countries that are rebuilding institutions.

The estimated costs of implementation have been calculated using parameters from other similar projects and prevailing rates for consultancy services. Equipment costs have been based on current prices. Travel and per diem rates are those used by international agencies.

A 10 percent contingency allowance has been provided for. Consultancy fees for international consultants are based on prevailing rates used by international agencies such as the World Bank in their respective programs. The rates shown are averages. For domestic consultants, the rates used are based on prevailing rates of remuneration in Yemen.

Travel costs, including per diem rates, are based on current rates applied by the international agencies. All equipment procurements are based on current price levels and assume that duty free importations will be permitted by the Government. No adjustments for inflation are incorporated. However, the provision for contingencies should permit coverage of any increases brought about by modest inflation.

However, due caution ought to be exercised as the costs indicated are estimates based on assumptions and should not be treated as precise costs.

The proposed inputs for the implementation of the SMP incorporate a large element of consultancy services. This is inevitable given the current skill shortages in Yemen.

Furthermore, rapid development of the statistical system and the execution of a modestly large program will demand concentrated inputs of skills. The option of first training Yemeni nationals before embarking on the launch of data development is not viable. Skill development will demand on the job training, with staff working with experienced consultants.

Estimated Cost of External Support for SMP (US\$)

	External Consultants	Local Consultants	Study tours	Training	Workshops	Equipment	Total
A. Organizational Development	439789	7200	213600	135628	30000	40000	866217
B. Statistical Infrastructure	246095	35200	78500	74354	30000	40000	504149
C. Data Development	1353849	164800	611700	564332	140000	118000	2952681
D: Investment In Infrastructure	1160267	59200	200800	347386		1800000	3567653
E: New office facilities: (Taiz, Hodiedah, Ibb, Hadhramout, Saa'dah)							875758
TOTAL	3200000	266400	1104600	1121700	200000	1198000	8,766,458

Recurrent expenditures

Recurrent expenditures to meet the costs of implementing the core work plan have not been costed. The reasons for this are linked to the current uncertainty about salary levels for civil servants. Current salaries average about US\$80 per month and using broad rule of thumb calculations indicate a wage bill of approximately US\$ 960000. To this must be added overheads and direct costs. A crude approximation of total budgetary costs is likely to be in the region of US\$ 1.8 million per annum.

With salary levels likely to be adjusted upwards, and an increase in direct costs because of a larger work program, a rough estimate of the required annual budget is likely to be in the region of US\$ 2.5 million per annum.

Successful implementation of the SMP will be critically dependent on the adequacy of budget allocations for the statistical system. For these reasons, it is important that the Government make a firm commitment to allocate budgetary resources that cover the recurrent costs of the work plan adopted. It needs to be stressed that without such a commitment, donor support is unlikely to be forthcoming. Furthermore, putting in place a sustainable system can only be achieved if there is a serious long term expression of interest on the part of the Government. In the final analysis external support can only be a catalytic element. It is not a substitute for allocation of national resources.

Technical assistance

Technical assistance in the form of consultancy services and training, both in country and out of country, will constitute very sizable project inputs. This will in large measure be critical to the success of the project. To achieve maximum impact a number of steps will need to be taken. First and foremost it is important that CSO has in place the absorptive capacity to take full advantage of the resource inputs generated by the Project. It will need to ensure that counterpart resources, both in terms of staff and funding for new surveys, are available. This

will call for both additional budgetary resources and a redeployment of existing resources.

There are broadly three possible modalities that could be applied for sourcing technical inputs. Each has its strengths and weaknesses:

The first option would be to invite well-reputed national Statistical Offices to bid for the consulting inputs being sought. The main advantage would be that this would lead to a kind of twinning arrangement resulting in a total system approach. The downside risks associated with such arrangements are several. In the first place, national offices in the statistically advanced countries are generally stretched and may not be able to make the commitment to deliver in a sustained manner the required inputs. Secondly, these offices do not have a deep understanding of the prevailing circumstances in Yemen. Transplantation of systems and approaches from a developed country environment to the circumstances prevailing in Yemen carries considerable risks. Past experience in several other countries that have mounted major statistical development using this approach has been mixed. Yemen's past experience in this regard is also relevant.

A second approach could be to hire individual consultants for specified tasks and activities. The main attraction of such an approach is that CSO would be able to hire the "best and the brightest" to design appropriate approaches. However, the gains would be far outweighed by the disadvantages of such arrangements. For a start, such arrangements would place an enormous hiring burden on the CSO, but more importantly they would virtually eliminate the possibility of coordinating the activities of different consultants. It is vitally important that consultants interact and act as teams given the intricate inter-connections between the various activities to be taken up. For example, a specialist in the design of the household survey cannot make an effective contribution without interacting with specialists in IT or sampling. On balance, it would be prudent not to proceed with this option.

A third option would entail contracting with a specialist firm of consultants specializing in the implementation of similar statistical capacity building projects. It would be highly desirable that the firm has an established track record, a core of experts who have close familiarity with statistical conditions in developing countries and have, more importantly, deep understanding and knowledge of international methodologies and best practice. The number of firms with such attributes is limited. A careful search would be needed. It would be best to advertise the Project inviting interested parties to submit proposals in a pre-qualifying stage.

In the final analysis, it may prove necessary to use a combination of the three options outlined above. It would, under these circumstances, be necessary to package components of the Project in a manner that leads to optimal arrangements that are also cost effective. Preparation of the parcels cannot be done at this stage. However, whichever approach is ultimately taken, it is imperative that the Project incorporates provision for the services of a full-time resident Chief Technical Coordinator (CTC).

The person appointed would need to be a highly experienced professional with strong managerial skills. The Chief Technical Coordinator would have the key role of providing continuity, linking the different activities and ensuring that local consultants work in tandem and in harmony with external consultants. The CTC would also have the critical role of working closely with the designated CSO Project Director in monitoring progress, identifying bottlenecks and in facilitating arrangements for placing local CSO staff in training programs outside the country. A more detailed job description will need to be developed after the Project contents and modalities are accepted. It is premature at this stage to finalize matters.

Consultancy costs are based on estimated time inputs and prevailing rates payable to high caliber consultants. An allowance been made for physical contingencies and price increases during implementation.

Turning to the identification of training institutes, a subject by subject approach has been taken. Based on the current Project outline, some institutes and agencies are listed below: However, CSO staff, because of insufficient language skills and proficiency in English is likely to find difficulty in gaining entry to many of the institutes and training centers. It is therefore suggested that the lead-time prior to the launch of the Project be utilized to develop basic English language skills of CSO staff.

General Statistical Training

- Statistical Institute for Asia and the Pacific (Country Courses/ Tokyo Based)
- Indian Statistical Institute

National Accounts

- The IMF Institute, Washington DC
- The Institute of Social Studies, The Hague (Diploma Program)

Price Statistics

- US Bureau of Labor Statistics, Washington DC

Sampling Methods

- US Census Bureau, Washington DC
- University of Michigan, Ann Arbor

Survey Methods

- Statistics Canada program in Survey Skills, Ottawa

Balance of Payments

- The IMF Institute, Washington DC

Money & Banking

- The IMF Institute, Washington DC

Government Finance

- The IMF Institute, Washington DC

Agricultural Statistics

- US Department of Agriculture, Washington DC

Information Technology

- To be determined

Demographic and Social Analysis

- University of North Carolina, Raleigh
- University of Michigan, Ann Arbor

Detailed budget

The detailed project budget by components and subcomponents, for external funding is presented in the table below

	Ext. Cons	Local Cons	Study tours	Training	Workshops	Equip.	Total
Grand Total	3200000	266,400	1,104,600	1,121,700	200,000	1,998,000	7,890,700
1. ORGANIZATIONAL DEVELOPMENT	439789	7,200	213,600	135,628	30,000	40,000	866,217
1.1 Study tour for senior Managers			50,400				50,400
1.2 Statistical policy seminars	73794		28,200	25,000			126994
1.3 Review of statistical legislation & revisions	38290		8,300	20,628			67218
1.4 Directory of statistics outputs		2,400		20,000			22,400
1.5 User need assessment	47569		8,300	25,000	10,000		90869
1.6 Administrative data sources needs assessment			10,000	20,000	10,000	20,000	60,000
1.7 Financial & budget Management	98750	4800	37,600			20,000	161150
1.8 Human resources Management	85781		33,200				118981
1.9 Statistics in a market economy	38746		18,800				57546
1.10 Statistical organization	22974		7,200		10,000		40174
1.11 Project preparations	33885		11,600	25,000			70485
2. statistical Infrastructure	246095	35200	78500	74354	30000	40000	504149
2.1 Development of household sample frame	61222	9,600	13,800	30,000		20,000	134622
2.2 Enterprise register	62937	12,800	18,800	15,264	10,000	20,000	139801
2.3 International standards & classifications	92571	12,800	37,600	20,000	10,000		172971
2.4 Support for user interactions	29365		8,300	9,090	10,000		56755
3. Data development	1353849	164800	611700	564332	140000	118000	2952681
3.1 Household sample surveys	481820	32000	110600	174058	10000		808478
3.1.1 Household income-expenditure survey	243082	9,600	54,200	75,000	10,000		391882
3.1.2 Upgrade analytical capacity of staff	118063	6400	56400	50000			230863
3.1.3 Survey skills	120675	16000		9058			145733
3.1.4 Training in sampling				40000			40000
3.2 Enterprise statistics	197722	33600	118400	93028	20000	0	462750
3.2.1 Enterprise versus establishment statistics	8532		7200	13028	10000		38760
3.2.2 Integrated business enterprise survey	72276	14400	39800	20000	10000		156476
3.2.3 Analytical use of enterprise data in national accounts, Bop,	52463		43200	20000			115663
3.2.4 Sampling in enterprise survey	34946		16600	20000			71546
3.2.5 Development of manuals	29505	19200	11600	20000			80305
3.3 Surveys of Economic Activity	82388	38400	28200	38764	10000	40000	237752
3.3.1 Monthly/quarterly surveys of large enterprise in a) Agric. B) Manuf., Retail-Wholesale, d) Transport	82388	38400	28200	38764	10000	40000	237752
3.4 price statistics	43188	6400	80200	20320	0	0	150108
3.4.1 General introduction to price statistics	12145		7200	5320			24665
3.4.2 Consumer price indices	12145		28200	5000			45345
3.4.3 Producer price indices	12145		28200	5000			45345
3.4.4 Import & Export indices	6753	6400	16600	5000			34753

	Ext. Cons	Local Cons	Study tours	Training	Workshops	Equip.	Total
3.5 Financial& Monetary statistics	93329	16000	42600	43894	30000	58000	283823
3.5.1 Banking & Monetary Statistics	7287			13894		14000	35181
3.5.2 Survey of financial institutions	41776	8000	23800	10000	10000	15000	108576
3.5.3 Government Finance Statistics	4615			10000	10000	14000	38615
3.5.4 Public and private External Debt Statistics	39651	8000	18800	10000	10000	15000	101451
3.6 External Trade & Bop	29420		11600	13842	0		54862
3.6.1 Balance of Payments	5951			8842			14793
3.6.2 Special problems in trade data compilation	23469		11600	5000			40069
3.7 National Accounts	184534	0	109500	86824	30000	20000	430858
3.7.1 Overview of SNA 1993	13879		8300	6824	10000	20000	59003
3.7.2 Supply & use accounts	44811		28200	20000			93011
3.7.3 Institutional sector accounts	44811		28200	15000			88011
3.7.4 Deflators	23469		16600	20000	10000		70069
3.7.5 Special areas and issues (to be defined)	25594		16600	10000			52194
3.7.6 Use of national accounts	31970		11600	15000	10000		68570
3.8 Demographic analysis	54250	19200	23200	25524	10000		132174
3.8.1 Improvement of current population estimates	27550	9600	11600	15524	10000		74274
3.8.2 Use of census data in small area database	26700	9600	11600	10000			57900
3.9 Social Statistics	187198	19200	87400	68078	30000		391876
3.9.1 Overview of social statistics	21313		14400	10028	10000		55741
3.9.2 Use of administrative data	89444		28200	22050	10000		149694
3.9.3 Social Statistics for small areas	44811		28200	16000			89011
3.9.4 Social indicators for poverty analysis	31630	19200	16600	20000	10000		97430
3.10 investment in infrastructure	1160267	59200	200800	347386	0	1800000	3567653
3.10.1 Detailed design of the IT System	192175		28200	45500			265875
3.10.2 Source data collection, processing and storage	192175	19200	49800	45886			307061
3.10.3 Storage and dissemination of statistical outputs	252900	16000	37600	75000			381500
3.10.4 Ensuring data confidentiality and security	139668	12000	18800	45500			215968
3.10.5 Technical infrastructure	252900	12000	33200	45500		1800000	2143600
3.10.6 Computerization and human resources	130449		33200	90000			253649
3.11 Const. of new Gov. CSO offices in :(Taiz, Hodiedah, Ibb, Hadramout, Saadah)							875758
Grand Total	Eight Million, seven hundred thousand, sixty six thousand, and four hundred fifty eight USD						8,766,458

Cost-effectiveness analysis

National statistics are a public good and generally financed from tax revenue. There is only very limited potential for cost recovery, mainly through data dissemination. Therefore, only marginal financial returns are expected from this project. However, there can be a fiscal impact contributing to a better budgeting process and a potential increase in revenues due to better information and coverage, as well as a possible increase in recurrent costs to cover enhanced operations of the national statistical system. Thus a project of this nature is not amenable to a cost-benefit analysis.

On the other hand, the economic benefits from the project are considerable. First and foremost a well functioning statistical system is an essential and vital institution in a market economy. Information flows are critical to the orderly functioning of markets. Furthermore, information availability promotes greater transparency and contributes to good governance. More directly, good statistics have a direct impact.

First, improvements in the efficiency of statistical operations and agencies will result in broader coverage of and higher quality data from given levels of expenditure.

Second, better data will enhance the potential for evidence-based decision making, at policy, program and project levels.

Third, the project would help address the significant costs of missing or inaccurate data that impact on the ability to macro-manage the economy.

The project's cost-effectiveness can be broadly assessed in terms of alternative designs that achieve the same desired results. The extreme option of leaving the statistical function entirely to private initiatives is clearly untenable, as impartiality would be gravely compromised. It would also lead to lopsided development of statistics. Official needs would not be fully met. The option of developing a decentralized system, with different agencies and ministries engaging in information gathering, would lead to duplicative efforts with the attendant inefficiencies, higher costs and less than satisfactory gains from economies of scale. The present design provides the benefits from the project that are expected to outweigh its costs, that is, why the net development impact of the project is expected to be positive.

There is a likelihood of increase in recurrent costs to cover enhanced operations of the statistical system, which might be partly offset by cost reduction achieved through better management and the abolition of costly and archaic methods, processes, and duplication of effort. However, a net increase in the recurrent budget will be necessary.

In order to evaluate the impact on economic development, three types of estimates have to be performed:

- (i) an overall assessment of the value and costs of delivering current statistics and of generating new and upgraded information;
- (ii) (ii) the long-term cost effectiveness of streamlining statistical work and of the efficiency and accuracy gains in reducing labor-intensive statistical operations; and
- (iii) (iii) the impact of reliable data on policy making. Since the outcomes of such technical assistance projects are generally intangible and cannot be observed in the short run, evaluation methods are highly speculative and may have to rely on agreed assumptions.

The investment in information and communication technology infrastructure should produce discrete productivity benefits as well as affect the way current functions such as data entry, validation, processing, transmission, and dissemination are performed.

The technical design of the project is based on a detailed analysis of the strengths and weaknesses of the statistical system against standards and best practices, e.g. on statistical methodologies and management. The proposed improvements and developments in management of statistical agencies, statistical infrastructure, and statistical operations and the choice of technology are appropriate to the Yemeni situation, as well as international good practice and standards.

2.10 Implementation Plan

Mechanisms for implementing the master plan

The project is expected to be implemented over a five year period. Although the project will incorporate assistance to a number of agencies and ministries including the CBY, the Ministry of Finance, and a number of line Ministries, the principal beneficiary will be the CSO. A key assumption made is that CSO will be the Executing Agency.

Donor support is critical to the execution of the strategic plan outlined in this document. The plan quantifies the financial resources required. A number of options exist as to how the plan could be financed. These will need to be explored and determined at an appropriate time. The critical next step beyond the presentation of the SMP to the Government would be ensure that the Government assumes ownership of the SMP and then identifies the optimal approach for financing the implementation of the SMP, as follows:

- Option I:** The Government seeks a loan from the World Bank under its STATCAP initiative.
- Option II:** The Government seeks assistance (grants) from multiple donors. A Trust Fund could be established into which donors contribute funds. A Consultative Council made up of all donors could determine disbursement from the Fund. Exercise of this option would avoid duplicative efforts by donors and provide for maximum coordination.
- Option III:** A single donor agrees to finance the implementation of the plan. Finance could be either under a grant program from an existing facility or a new source.
- Option IV:** Different donors undertake to finance components of the plan. It will be necessary to establish a Coordinating Committee made up of the different donors to ensure that there is effective coordination.
- Option V:** The Government of Yemen finances the project from special receipts or general resources under its command.

Executing agencies

Given the central role of CSO, both as the central statistical agency and the principal implementer of the project, it is best placed to take on the role of Executing Agency. Other key institutions would be the National Statistical Council to act as a coordinating body at the highest level of government with participation

from line ministries, the central bank and from other civil society groups and the private sector. The National Statistical Council should be constituted at an early date and its membership should be inclusive. It is critically important that the Council include representatives of Ministries that generate data (e.g. Health, Education, Agriculture, Commerce etc), and also mainline Ministries that are major data users (e.g. Finance, Planning etc.) Such a body would usually define the national statistical strategy, policies, priorities and broad implementation arrangements, oversee national program elaboration and implementation, and bear the responsibility for results and their quality.

Implementation arrangements need to ensure the timely and reliable flow of funds to the implementing units at all levels. Slow disbursement and inadequate resources for the sectors and institutions involved are two of the biggest roadblocks to a sound functioning of national statistical systems. Procurement for all financed activities will be carried out in accordance with appropriate international guidelines for procurement.

Management and Coordination

Successful implementation will demand strong management arrangements. The Project Director at CSO will play a key role in project implementation. However, his ability to play an effective role will demand strong support from the senior management of CSO. To this end, it is suggested that a Project Steering Committee be established, with its membership comprising the senior managers at the level of General Directors of CSO. As the Project transcends the activities of CSO and extends into several other agencies, it would be appropriate to co-opt senior level representatives from other agencies e.g. the CBY, the Ministry of Finance etc that would be receiving assistance under the Project.

Although the Project implementation plans, drawn up at the launch stage, will be fairly comprehensive, they should be viewed as indicative. Experience with similar sized projects in other countries has demonstrated that shortfalls and deviations from meticulously designed project plans are inevitable. The need for flexibility must be factored in. It is therefore suggested that beyond the overall Project plan, an **Annual Implementation Plan** should be developed prior to the commencement of the year. It should also be noted that detailed specification of the various actions/activities to be taken up in pursuit of the Project components, cannot be meaningfully done in advance. An appropriate approach would be to hold detailed discussions between CSO and the external consultants to develop a **Component Initiation Agreement** just prior to the commencement of activities under a particular component. Such an agreement would spell out in considerable detail all of the actions planned together with understandings about the timing, types and nature of inputs to be provided by the parties to the Agreement. This approach has been successfully used in China by the Chinese National Bureau of Statistics and Statistics Canada, and is now being used by NBS in its other technical cooperation projects.

The complexity, size and scope of the Project are in several ways unique. The Project covers a whole range of subject areas; it involves a number of

national agencies and it seeks to create a new statistical system demanding an entirely new culture. There is only limited experience from other country situations that can be drawn upon. In most technical assistance projects in the field of statistics, the projects are designed to improve or modify particular aspects or segments of the statistical system. In the present case, the Project is all embracing, requiring a mix of skill inputs ranging from management practices, IT applications to the entire range of subject fields in different branches of economic and social statistics .It is therefore necessary to evolve arrangements that fit the unique circumstances in relation to this Project.

Timeline for Implementation

As noted earlier, the proposals call for the SMP to be implemented over a five year period. The implementation design has been structured so as to achieve speedy results. As a consequence, a number of the scheduled activities in each of the components have been front-loaded. In terms of sequencing, activities pertaining to Organizational development and investments in infrastructure should be seen as launching activities. Creating the right environment is critical to successful pursuit of data development and the launch of new data collection efforts. Data development too has to be properly sequenced. It must be preceded by the adoption of new classifications, the availability of a sampling frame and a business register. Along with these, it is important to rapidly build certain key technical skills. New surveys can only be launched once the necessary infrastructure and skills are in place. Work in the national accounts area, for the most part, will have to await the availability of new basic data. Based on these considerations, a tentative scheduling of activities has been attempted and is depicted in the Chart below.

Timeline for Implementation

	Year 1				Year 2				Year 3				Year 4				Year 5			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
1. ORGANIZATIONAL DEVELOPMENT																				
1.1 Study Tours for Senior Managers																				
1.2 Statistical Policy Seminars																				
1.3 Review of Statistical Legislation & revisions																				
1.4 Directory of Statistical outputs																				
1.5 User Need Assessment																				
1.6 Financial & Budget Management																				
1.7 Human Resource Management																				
1.8 Statistics in a Market Economy																				
1.9 Statistical Organization																				

	Year 1				Year 2				Year 3				Year 4				Year 5			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
2. STATISTICAL INFRASTRUCTURE																				
2.1 Development of Household Sample Frame																				
2.2 Enterprise Register																				
2.3 International Standards & Classifications																				
2.4 Support for user Interactions																				
C. DATA DEVELOPMENT																				
3. Household Sample Surveys																				
3.1 Household Income-Expenditure Survey																				
3.2 Upgrade analytical capacity of staff																				
3.3 Survey Skills																				
3.4 Training in sampling																				
4. Enterprise Statistics																				
4.1 Enterprise versus establishment statistics																				
4.2 Integrated Business Enterprise Survey																				
4.3 Analytical use of enterprise data in National Accounts, BoP,																				
4.4 Sampling in enterprise surveys																				
4.5 Development of manuals																				
5. Surveys of Economic Activity																				
5.1 Monthly/Quarterly Surveys of Large Enterprises in a)Argic. b)Manuf.,Retail-Wholesale,d)Transport																				
6. Price Statistics																				
6.1 General Introduction to Price Statistics																				
6.2 Consumer Price Indices																				

	Year 1				Year 2				Year 3				Year 4				Year 5			
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
6.3 Producer Price Indices																				
6.4 Import & Export Price Indices																				
7. Financial & Monetary Statistics																				
7.1 Banking & Monetary Statistics																				
7.2 Survey of Financial Institutions																				
7.3 Government Finance Statistics																				
7.4 Public and Private External Debt Statistics																				
8 External Trade & BoP																				
8.1 Balance of Payments																				
8.2 Special Problems in trade data compilation																				
9 National Accounts																				
9.1 Overview of SNA 1993																				
9.2 Supply & Use Accounts																				
9.3 Institutional Sector Accounts																				
9.4 Deflators																				
9.5 Special areas and issues (to be defined)																				
9.6 Use of National Accounts																				
10. Census of Population																				
10.1 First Phase Listing & Processing																				
10.2 Preliminary Count																				
10.3 Full Enumeration																				
10.4 Data Input and Analysis																				

11. Demographic Analysis																				
11.1 Improvement of current population estimates																				
11.2 Use of Census Data in small area database																				
12. Social Statistics																				
12.1 Presentation of the social statistics																				
12.2 Utilization of administrative data																				
12.3 Social statistics for small areas																				
12.4 Social indicators for Poverty analysis																				
D. Investment in infrastructure																				
1.1 Detailed design of IT system																				
1.2 Collecting the source data processing and storing																				
1.3 Storing and dissemination of the main statistical output.																				
1.4 Guaranteeing the privacy and protection of the data.																				
1.5 Technical infrastructure																				
1.6 Computing and human resources																				

2.12 Sustainability Issues

Sustainability of the project benefits depends critically on the government's commitment to provide budgetary support beyond the implementation phase, particularly for activities not directly connected with data collection but indispensable for maintaining the improved statistical process: staff training, statistical research, maintenance of newly installed statistical and physical infrastructures.

The project carries some risks. Among the typical risks, common to projects of this nature, are such as an insufficient absorption capacity of the data-producing agencies for project implementation; departure of newly recruited and re-trained staff from the statistical system; delays in the implementation of experience gained through pilot surveys; delays in availability and disbursement of funds.

Risk	Risk Rating	Risk Mitigation Measure
Commitment of the Government to support statistical work in the country by providing adequate resources for statistical observations and related activities and administrative reporting.	S	Government adopts the SMP and enters commitments to increase the budget allocation for statistical work.
Commitment of the CSO and other major data collection agencies to sustain the reform of the statistical system after project implementation completion and the withdrawal of consultants.	M	
Absorption capacity of the CSO will be strengthened.	M	A detailed assessment of staff participation in each component implementation will need to be performed with necessary adjustments to the implementation schedule/components' activities.
The new organizational structure and management systems are not acknowledged by the CSO staff.	N	Staff participation and ownership in the development of the new organizational structure
Newly recruited and re-trained staff is not retained in the statistical system	M	Establishment of a new system of staff assessment and rewards, better work environment should partly mitigate this risk
Successful project pilot activities are introduced into regular practice with a considerable time lag.	M	Better budget programming should ensure availability of funding for the new surveys
Close cooperation over the implementation issues between the CSO and other beneficiaries (MOF, CBY and line Ministries) is not established.	M	Establishment of the participatory Administrative Committee to supervise the Project implementation
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

The process of modernization might have a direct and, in some cases, disturbing impact on the statistical staff. While improving their work environment through human resource development and the introduction of modern equipment for data processing and communication, some staff will gain from retraining, from acquiring new skills and added responsibilities. Others, however, will face job loss, retraining, perhaps relocation. Some may simply find that adapting to new ways is stressful. These factors should not be underestimated. The project design has factored these issues into the new human resource policies that will need to be adopted by CSO.

There are also potential controversial issues resulting from improved data availability and accuracy, e.g. changes in poverty measures could affect household subsidies; improved population numbers might affect election procedures as well as level of regional subsidy; consumer price index revision might affect collective bargaining and provoke salary reviews both in public and private sectors.

Monitoring and Evaluation

The monitoring and evaluation of statistical capacity building efforts is a crucial part of such programs. It will help assess existing deficiencies, determine needs and priorities, and help allocate program resources. Recent work by a task force of the PARIS21 consortium has highlighted the need for a structured approach to the measurement and monitoring of statistical capacity, requiring the examination of the impact, outcome, output and component levels. The PARIS 21 methodology will be applied.

Indicative key variables that will be monitored closely will include:

User Satisfaction

Rate of user satisfaction increases from x to y by end of program (include consultation, usefulness of products, etc.)

Targeted statistical products are easily accessible in relevant media with metadata and interpretation of findings, etc.

Statistical Quality

Sound data sources used; coverage of statistics improves or is more relevant

Increase in surveys response rates (e.g. from % to %)

Validation is carried out for at least % of data sources and statistical products

Timeliness

Reduction in time lag between data collection and dissemination

Statistical outputs are released within the time limits and with frequency meeting

SDDS requirements

In the interim, the intermediate outcomes identified (called “outputs” in the log-frame) will be used as proxies of progress towards the outcomes.

Intermediate outcomes will be assessed at the output level. These measures are different than activities completed (which are tracked at the input level) in that they measure the value added of those components. For instance, not only will training conducted to measured, but also the percentage of staff who have improved statistical skills set or percentage of staff audited who use and upkeep skill set.

Progress in implementation of the components will be measured by assessing the extent to which the Master Plan is implemented. A robust system of monitoring and evaluation will be established to assess, on a regular basis, the extent to which programs are making the expected impact, and resulting in the anticipated outputs and subsequent outcomes.

As part of the program, and in their capacity as coordinators of the statistical system, CSO will need to be assisted in conducting annual assessments of the state of the statistical system. There are a number of tools now available, all of which should be examined and used where appropriate.

Measuring the impact of better statistics on improved decision making and resource management is a more difficult and less precise task than measuring outcomes and outputs. If better statistics are to have the required impact, government, the private sector, and civil society organizations will need to use data in their management processes and their decision making systems. It is assumed that the institutional framework, including incentives and capacities for policy makers and managers to use statistical data, needed for this to happen will exist or will be addressed through other programs, such as those involved with institutional reform and change.

A schedule of reporting against progress will be established with the CSO, using the indicators and monitoring framework set out above. CSO needs to use the M&E system for management on an on-going basis. It will also need to prepare an annual report on the implementation of the project Plan, together with a work plan for the following year to include a focus on progress towards outcomes and intermediate outcomes, as well as implementation progress.

A performance evaluation ought to be conducted half way through the program. The evaluation will involve CSO, other producers of official statistics, representative from users, including government, NGOs, the private sector, and donor and international organizations. It will also include an audit of operation procedures, and a preliminary assessment of outcomes, and will be used to improve program implementation.

2.13 Summary of targets and indicators

The log frame for the Project is provided below:

Yemen: Modernization of the Statistical System

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions (from Goal to Mission)
Overall Goal: (i) Implementation of a broad-based poverty reduction strategy and attaining job-creating, sustainable economic growth (ii) Support of institution-building activities	Sector Indicators: Trends in poverty and unemployment levels, reduction; trends in GDP and investment growth rates Improved management of public resources and streamline public expenditure	Sector/ country reports: Household survey and other poverty survey reports Government statistics	Sustained commitment to reform, efficient management of resources leads to improvement in social outcomes and reduction of poverty. Willingness to restructure public institutions
Project Development Objective: Sustainable statistical system which efficiently provides timely and accurate data for policy evaluation and decision making	Outcome / Impact Indicators: Improved poverty monitoring, better informed economic and social policy evaluation and decision making	Project reports: Donor monitoring activities Data users surveys	(from Objective to Goal) Statistical information is appropriately used for policy making. Public access to statistical data is not restricted.
Output from each Component: A: CSO's ability to formulate and carry out statistical policy in the country is enhanced. Organizational, managerial, human resource and participatory capacity are developed.	Output Indicators: Annual data collection plans and long-term strategy programs are based on Program Budgeting System. Staff assessment reviews are carried out annually. Training plan in place updated at least annually and training courses regularly take place. User education and data providers' motivation activities are regularly implemented. Participatory mechanism for seeking advice on the major data outputs of the statistical system, modes and time frame for delivery is established. Increase of rate of response Reporting and processing burden diminished: number of statistical forms decreased	Project reports: Project progress reports Data providers surveys Data users surveys	(from Outputs to Objective) Commitment of the Government to support statistical work in the country by providing adequate resources for statistical observations and related activities and administrative reporting. Commitment of the CSO and other major data collection agencies to sustain the reform of the statistical system after project implementation completion and the withdrawal of consultants

B: Basic elements of the statistical infrastructure – sample frames, statistical standards, legislative arrangements – are in place.	The HHSF is upgraded based on the population census results. Business register is operative and regularly updated. Process of transition to the new Classification structure is completed Necessary improvements and modifications to the Law on Statistics are done to reflect agreements on effective statistical coordination and new data collection mechanisms.	Project progress reports Supervision missions Disbursement Reports
C: Improved coverage, accuracy, and policy relevance of the data produced by the CSO and other major data collecting agencies. More efficient data collection system, based on sample surveys, is introduced.	Achieved full compliance with the international statistical standards.	Project progress reports Disbursement Reports Data providers surveys Data users surveys
D: Line Ministries units' capacities strengthened to provide better data for informed policy on the key economic and poverty analysis issues by improvement of the information database and the staff analytical skills	Data presentation and processing standards, based on the relevant database output formats for analytical purposes upgraded.	Analytical, planning, and implementation documents prepared by project teams, consultants, etc. Project progress reports Supervision missions
E: Efficiency of the statistical process (data collection, processing, transmission and dissemination) is improved by introduction of better communication and information technology.	Integrated meta- and database of all major economic and social statistics is available for users Steady growth of number of visits to the CSO website, increase in the number of users provided with electronic copies of main statistical publications;	Assessment of IT capacity building according to the framework developed by the CSO Project progress reports Supervision missions

Project Components / Sub-components:	Inputs: (budget for each component)	Project reports: (from Components to Outputs)
A: ORGANIZATIONAL DEVELOPMENT and MANAGEMENT A1. Streamlining the organizational set-up of the <u>Yemen Afghan</u> statistical system A2. Building of institutional management systems A3. Strengthening of the system of staff training and re-training A4. Development of the statistical data dissemination and users education strategy A5. Improvement of relations with respondents and data providers	Project management reports (PMR) Disbursement Reports Supervision missions	Absorption capacity of the CSO is sufficient for the project implementation. The new organizational structure and management systems are acknowledged by the CSO staff. Newly recruited and re-trained staff is retained in the statistical system. Local government officials accept decrease in detail of statistical data at the local level
B. STATISTICAL INFRASTRUCTURE B1. Improvement of household sample frame B2. Establishment of the statistical register of enterprises and individual entrepreneurs B3. Introduction of classifications B4. Improvement of legislative basis of the Statistical System		 Necessary amendments are made to the Statistical Law on choice of observation methods and means, stipulation on equal information access, and relationship between the CSO and other data providers, as well as dissemination tools.
C. DATA DEVELOPMENT <i>Upgrading of data collection mechanisms</i> C1. Household sample surveys C2. Integrated annual enterprise statistics C3. Sub-annual surveys of economic activities <i>Implementation of international standards in major data categories</i> C4. National accounts C5. Price statistics C6. Government finance statistics C7. Money and banking statistics C8. Foreign trade and balance of payments C9. Demography, social statistics and poverty statistics C10. Other statistics		 Successful project pilot activities are introduced into regular practice with a minimal time lag.
D. STRENGTHENING OF INFORMATION BASIS FOR DECISION-MAKING AND FORECASTING AT THE MINISTRY OF ECONOMY AND D1. Modernization of data presentation and processing for analytical purposes D2. Application of new short- and medium-term forecasting models		 TA recipients are trained to take over the full range of activities
E. INTRODUCTION OF MODERN COMMUNICATION AND INFORMATION TECHNOLOGY E1. Development of a detailed design of		 The Government provides resources for maintenance of the IT elements after the completion of the project.

the IT System

E2. Source data collection, processing and storage systems

E3. Storage and dissemination of statistical output

E4. Ensuring data confidentiality and security

E5. Technical infrastructure

E6. Computerization and human resources

ANNEXES

**ANNEX I: The Gross Indicators of the Population, according to the Final
Results of the 2004 Census and the Final Results of the 1994 Census**

Items / Indicators		Final Results 1994 Census	Final Results 2004 Census	Increase/Decrease during the period between the two censuses		Increase/Decrease Yearly Ratio
				No.	Ratio during the period	
1	General total of Population	15,831,757	21,385,161	5,553,404	35.1	
2	Population growth rate between the to the two census	3.7%	3.0%	- 0.7%	- 18.9	- 1.9
3	Total resident population	14,587,807	19,685,161	5,097,354	34.9	3.5
4	Ratio	92.1%	92.1%	0	0.0	0.0
5	Absent population out of Yemen + Added population for technical considerations on 1994 only.	1,243,950	1,700,000	456,050	36.7	3.7
6	Ratio	7.9%	7.9%	0	0.0	0.0
7	Total resident population during the reference night of census	14,587,807	19,685,161	5,097,354	34.9	3.5
8	Resident population (Males)	7,473,540	10,036,953	2,563,413	34.3	3.4
9	Resident population (Females)	7,114,267	9,648,208	2,533,941	35.6	3.6
10	Gender ratio (number of males per 100 females) = (8) ÷ (9) × 100	(105)	(104)	- 1	0.95	
11	Total dwellings	2,201,438	2,834,437	632,999	28.8	2.9
12	Total households	2,162,847	2,755,833	592,986	27.4	2.7
13	Average number of households per dwelling = (12) ÷ (11)	0.98 (household)	0.97 (household)	- 0.01	- 1.02	- 0.1
14	Average number of members per dwelling = (7) ÷ (11)	6.6 (individual)	6.9 (individual)	0.3	4.5	0.5
15	Average number of family members = (7) ÷ (12)	6.7 (individual)	7.1 (individual)	0.4	6.0	0.6

ANNEX II: Act No (28) for the Year 1995 of Statistics

Chapter One

Nomenclature and Definitions

Chapter Two

Responsibilities, Objectives & Methods of Statistical Activities

Article (3) The Statistical Objectives and methods of statistical activities are the following:

- 1. provision and dissemination of timely statistical information and indicators so that it can be used as an instrument for planning, analysis and the scientific research and studies that help policy makers to take their proper decisions thereof.*
- 2 To undertake the preparation for the projects and the planning for censuses and statistical surveys in collaboration with various government agencies in order to be aware of the human, economic and natural potentialities and measurement of the developments and changes occurring in the economic and social variables*
- 3 Collection, classification, processing, analysis, dissemination and documentation of the statistical information. These activities should be based on preparation of standard criteria, rules, classifications and tabulation in addition to the design, of systems and programs and work plans needed to assist in the achievement of such goals, which must be followed at the time of the statistical data preparation.*
- 4 Unification of the criteria, concepts definitions and terms relating to collection and compilation of various data and also unifying of the methods of collecting such data from their sources on perfect scientific basis as well as issuance of guides thereof.*
- 5 Establishing a comprehensive, consolidated, statistical and information system which kept pace with the developments in the different aspects of life in addition to issuance of periodical statistical publications.*

- 6 *Conducting comprehensive or sample surveys in collaboration with the statistical units in the State bodies or entrusting the others to conduct such surveys partially or totally.*
- 7 *Collection, processing analysis and dissemination of current data and information about various resources and their utilization, and the different aspects of the societal activities, in coordination with other government bodies.*
- 8 *Establishment of a statistical training center for the training and preparation of cadres working in the statistical services and up- grading their performance.*
- 9 *Setting up specific systems and programs for training the CSO staff, its branches and offices as well as undertaking staff training in the various statistical units, to increase the efficiency in collaboration with the concerned bodies.*
- 10 *Establishment of a documentation and information system to ensure obtaining of such information on a timely basis and to keep, store and retrieve documents in order to be utilized in the statistical, planning and development works and the economic administration at the central and local levels.*
- 11 *Propose a system in the field of computers to be approved by the Cabinet Ministers, and to suggest the bases and rules for collecting and organizing the software available in the various state organizations which can be done by conducting a study on the capacity and capabilities of computers and on the ways of utilization of such machines at the central and local levels, and to set up a proposal about the national policies and strategies with regard to usage of such computers.*
- 12 *Conduct comprehensive censuses and sample surveys covering various resources and statistical phenomena.*
- 13 *Direct collection of data and information from the field and to organize collecting of such from the various respondents in the republic through the administrative means.*
- 14 *To undertake opinion studies with respect to the economic and social phenomena in the republic.*
- 15 *Contributing to the demographic, economic, social fields and library researches and studies.*
- 16 *Undertake projections and estimations of various statistical indicators.*

17 *Compilation of the National Accounts. Preparation of the economic and commodity balances and preparation of the indexes of the prices.*

18 *Carry out the economic analysis of the final accounts of the government, local organizations, state, cooperatives, mixed and private sector corporations.*

Chapter Three

Authorities of the Organization

Article (4) For purpose of the implementation of the provisions set forth in this act, the respective organizations will exercise the following authorities.

- 1 Collecting the statistical information relevant to function through the adopted statistical methods from all the respondents except the data relating to the military and security corporations. All respondents must provide the required information on time and in correct form.*
- 2 The responsible bodies and persons must facilitate entry of the interviewers into the corporations, cooperatives and public, mixed, cooperative and private and private corporations to ascertain and verify their records and registries relating to their functions.*
- 3 Entry of the houses and establishments in the comprehensive and specific censuses and surveys during the field work phase after having permission from the owners while observing the effective acts, decisions, customs and the traditions prevailing in the society.*
- 4 Shall ascertain any statistical information given to him by the respondent if he sees that such information is incorrect.*
- 5 Obtain copies of the final accounts of the government central and local organizations, government enterprises, cooperatives and the corporations of the final mixed and private sectors.*
- 6 The Central Statistical Organization undertakes transference of the responsible who violate the provisions set forth in article no (7) of this act to the concerned bodies to take the legal action towards them.*
- 7 The Central Statistical Organization undertakes the technical supervision over the statistical units and administrations in the*

ministries and government departments so that to ensure unification of the technical methods of collecting of statistical data.

Chapter Four

Guarantee of Confidentiality of Statistical Data and Information

Article (5) All statistical data related to the conduction of censuses, comprehensive or sample surveys, or any other statistical activities are confidential, and cannot be publicized, or made available to others without the consent of the data providers.

Article (6) All statistical data and other statistical information collected by the Central Statistical Organization shall only be used for statistical purposes, and cannot be used for the purpose of applying a financial burden on the providers, nor can it be used as criminal evidence, or any other legal procedure. It can, however, be used as evidence against those who provide incorrect or invalid information.

Chapter Five

Prohibited Actions & Behavior and penalties

Article (7) Without dropping the more severe penalty –by law- a penalty, not to exceed one year imprisonment and ten thousand YR in fines, is applied to those who:

- Jeopardize the confidentiality of the data, which he/she might have had access to due to his work or due to being part of any statistical exercise, as per this law.*
- Use –in a direct or indirect way- for his/her sole purposes, for the purpose of benefiting others, or for the purpose of harming others, any data or statistical information that he/she might have acquired by means of his/her professional post and that has not yet been released or published, in which case, he/she bears the full responsibility of compensating others for any damages caused by such conduct.*
- Purposefully hinder any of the census or statistical surveying activities.*
- Refuse to provide data requested by the government, or purposefully altered the data he/she provides, or purposefully provide incorrect data.*
- Acquire, or try to acquire data pertaining to others, as outlined in article five of this law, without being officially delegated to do so.*
- Publish, or cause the publication of incorrect statistical data, or statistical data not yet approved for publication.*

- *Ruine, waste, or loose documentation containing statistical data that are under his jurisdiction or that he/she acquired from other parties, for the sole purpose of causing harm or damages to others.*

Chapter Six

Concluding Provisions

Article (8) a. Statistics are not deemed to be considered official unless they are prepared or published or approved by the Central Statistical Organization, who is the official body which is authorized to demand the statistical data and information from the government organizations and the natural and legal persons.

b. Except what is relevant to the internal work of the formal organization and those of the public sector, all the government organizations and the statistical units and the natural and legal persons must coordinate with the Central statistical Organization prior to conducting the statistical researches that they plan to conduct through asking questions, using forms or issuing of publications containing statistical information and figures in order to ensure safety and accuracy thereof and in order to make the utmost use of such

Article (9) The Executive Regulation of this act will be issued by the Council of Ministers' resolution based on the proposal submitted by the concerned minister.

Article (10) Any context or provision contradicts with the provision set forth in this act shall be cancelled.

Article (11) This act shall be enforced from the date of issuance and shall be published in the formal gazette.

Issued in the Presidentship of the +republic, Sana'a

*Date: 23 Jumadah Al- Thani / 1416 H
Corresponding to; November 16, 1995*

General Ali Abdullah Saleh

President of the Republic

ANNEX III: REPUBLICAN ACT NO (233)
FOR THE YEAR 2003
ON THE
ORGANISATIONAL STRUCTURE OF THE CSO

DRAFT REPUBLICAN ACT NO (233)
FOR THE YEAR 2003
REGARDING THE STATISTICAL ORGANISATION OF THE
CENTRAL STATISTICAL ORGANISATION

THE PRESIDENT OF THE REPUBLIC

After consulting the republic of Yemen's
 Republican Act # (19) of the year 1991 about the Civil Service
 & Republican Act # (20) of the year 1995 about Statistics
 & Republic Act # (105) of the year 2003 about Cabinet formation
 & The proposal of the Minister of Planning and International Cooperation
 & After the approval of the Council of Ministers (Cabinet)

It was decided:

Chapter One
Title Introduction and Objectives

Section: 1 Title and Introductions:

Article 1: This act is called the "Structural Organisation of the Central Statistical Organisation"

Article 2:

Terms and expressions herein will have the meaning as indicated below when otherwise not stated.

Republic: The Republic of Yemen

Minister: Minister of Planning and International Cooperation

Organisation: Central Statistical Organisation

Chairman: Chairman of CSO

Deputy Chairman: Deputy Chairman of CSO

Entity: Actual or legal entity, public or private, local or foreign, residing in the Republic of Yemen, and required to provide statistical information on request

Statistical information: All umbers and data sets related to the financial, social, cultural, demographic, and all other activities of the society

The Act: Act # (28) of the year 1995 regarding Statistics

Article3:

A: The organisation is the legal entity that has financial obligations and is under the supervision of the Minister.

B. The headquarters of the CSO is the capital city of Sana'a and can establish branch offices in the Governorates based on the Ministers decision after a proposal from the Chairman.

Chapter Two

Objectives and Activities

Article 4: The CSO, abiding by the constitution and the government's policies aims at accomplishing the following:

1. The preparation of statistical procedures used to collect statistical information on a regular basis to cover all activities of the society
2. The preparation of projects and plans for sample surveys and censuses, collaborating with other government institutions and through CSO staff and/or through the hiring staff from outside the CSO partially or completely
3. The participation in devising statistical procedures that will be used to monitor the implementation of the development plans, partially and/or totally and the preparation of implementation reports.
4. Creating statistical standards, terminology and procedures with the objective of developing the statistical systems as a tool of planning and development, similar to those of the Arab and internationally community
5. Creating rules and technical instructions that will facilitate the government's and other financial sectors, build up of financial units and capacities, using the most modern means
6. Collecting data and information on different resources, and using that information for all development needs, after preparation and analysis and creating different indicators
7. field and office collection of data and other information
8. Conducting surveys on different financial and social happenings in the RofY
9. Creating a unified statistical system that facilitates and government development needs and senses the changing and ever improving technologies
10. Following up of development in statistics world wide and updating procedures and means especially those related to the construction of national Accounts and other financial balances. Further technical improvements in the area of financial analysis.
11. Participating in field and office research in demographic, financial and social areas.
12. Implementing the Act in an effort to develop the statistical system both quantitatively and qualitatively.
13. Approving statistical information produced by others after checking for its reliability and permitting its dissemination.
14. Building a consensus among CSO's and governments employees about the vital importance of statistics for development planning.
15. Devising statistical systems and programs for training of the CSO staff at CSO head quarters and branch offices and government's staff and collaborating with concerned parties.
16. Creating and strengthening relations with institutions domestic, Arab, and foreign specialized in statistics for the purpose of benefiting from their experience in this field... The CSO is the official representative of the R of Y domestically and internationally

17. Any other tasks stated by law.

Chapter Three Section One

A. CSO Chairman's tasks

Article 5: The Chairman will supervise all the CSO's activities all over the R of Y and the implementation of government's policies in statistics according to the law and under the supervision on the Minister using the following powers;

1. Supervise the preparation of detailed work plan of the CSO
2. Following up of implementation of those plans
3. coordinating activities of different sectors of CSO and directorates and branch offices in order to achieve goals
4. Nominating deputy Chairman, assistant deputies, technical office heads and general managers and conveying nominations to the Minister to take proper action
5. Coordinating with government officials regarding statistical activities. He can invite vice ministers or deputies to discuss activities related to their ministries. He can also form committees from within CSO or from outside to study and collaborate efforts. The Chairman will state the objectives of forming such committees and their powers after conferring with respective ministers or vice ministers
6. Collaborating with central and local authorities regarding CSO activities
7. Representing the CSPO domestically and/or abroad when representation is at his level
8. Supervising the preparation of guidelines of internal structures needed to achieve goals, abiding by related laws and acts and conveying them to the related authorities for approval.
9. Strengthen relations with statistical organizations on the Arab regional and international levels.
10. Chairing the CSO's Council meetings after issuing decree needed for its operation
11. Chairing the meeting of Board of Director's of the CSO
12. Any other tasks or powers he might need by nature of his post or by mandate of law or by minister's request

Section Two

Tasks and Powers of Deputy Chairman

Article 6: The deputy Chairman will under the supervision of the Chairman have the following tasks and powers:

1. Supervising all sectors and general directorate under his command
2. Collaborating between above mentioned sectors and directorates
3. Following up of the implementation of tasks and programs of mentioned sectors and directorates
4. Supervising data production and dissemination of sectors and general directorates under his command
5. Orchestrating meetings with other sectors and directorates as needed to achieve goals.
6. Assessing activities after conferring with other deputies and general directors and proposals to Chairman
7. Requesting reports from assistant deputies and general directors under his command
8. Taking day to day executive actions needed to improve performance, at the level sectors and directorates under his command
9. Representing the CSO domestically and abroad when representation is at his level
10. Supervising the construction of training programs and maintenance plans of computers, maintaining development of computer systems at highest levels
11. Following up the preparation of annual reports about staff performance in sectors and general directorates under his command
12. Taking over the task and powers of chairman when not present
13. Any other tasks mandated by nature of his work, by law or by the Chairman's request.

Section Three

C: Tasks and Powers of Assistant Deputies

Article 7: The assistant deputy Chairman will under the supervision of the Deputy Chairman have the following tasks and powers:

1. Prepare plans and programs related to his sector and report on a timely basis to the Deputy Chairman
2. Assess implementation levels of plans of general directorates under his sector and report to the deputy Chairman
3. Hold regular meetings with directorates under his sector to follow up on activities
4. Collaborate with other sectors at planning and implementation levels and exchange reports with those sectors
5. Follow up on daily activities of directorates under his sector and provide guidance to improve performance

6. Provide the deputy Chairman with proposals for training and capacity building
needs of sector staff
7. Strengthen the spirit of team work among his staff
8. Devise and implement study programmes and subjects related to his sector
9. Take executive action on technical and administrative issues related to his sector
10. Follow up on the development of statistical and informatics activities and provide the deputy Chairman with related proposals
11. Represent the CSO domestically and abroad when representation is at his level
12. Provide the deputy Chairman with annual reports assessing the performance of his sector
13. Any other tasks or powers mandated by the nature of his work, by the law or by the deputy Chairman request.

Section Four D The CSO Council

Article 8: 8-1 The CSO council will be formed by a decree of the CSO Chairman as follows:

- | | |
|-----------------------------|---------------------|
| 1. CSO Chairman | as Council Chairman |
| 2. CSO Deputy Chairman | as Vice Chairman |
| 3. CSO Assistant Deputies | as member |
| 4. Director of Training | as member |
| 5. Head of Technical office | as member |
| 6 General Directors | as members |

8-2: The CSO Chairman is authorised to invite to the Council meetings anyone as the need arises from the CSO head quarters or branch offices or from outside the CSO

Article 9: The CSO council acts as a consultative council to the CSO Chairman in all matters related to CSO activities, particularly the following:

- (i) Annual work plan of the CSO
- (ii) Assessment of the CSO's plans and activities
- (iii) Annual financial, human resources and capacity building plans
- (iv) Performance reports and assessment
- (v) Draft acts and internal guidelines of CSO activities\
- (vi) Any other subject provided to the Council by the Chairman or the

Minister

Article 10. The Chairman shall issue a decree that governs the council's activities which will state a regular meeting every month and extra meetings as needed.

Chapter THREE

CSO Organization The organizational structure

Article 11. The structural organization of the CSO consists of the headquarters and branch offices in the secretariat of the Capital and Governorates, as follows:

First: The Chairman who has under his direct instruction/command the Technical Office

Article 12

12.1 The Chairman of the CSO holds the degree of Vice Minister and shall be appointed through a Republican decree

12.2 The Deputy Chairman holds the degree of deputy minister and shall be appointed through a republican decree after approval of the cabinet based on the minister's proposal and the Chairman's nomination.

Article 13

13.1 Each sector of the CSO shall be headed by an assistant deputy Chairman who holds the degree of as assistant deputy minister, appointed through a republican decree after cabinet approval based on minister's proposal and Chairman's nomination.

13.2 Each Directorate is headed by a General Director

Article 14

14.1 The director of the Training Centre shall hold the degree of an assistant deputy minister appointed through a republican decree after cabinet approval of minister's proposal and Chairman's nomination

14.2 The head of the Technical Office shall hold the degree of General Director

Article 15: The director of the Chairman's office shall hold the degree of General Director and his tasks will be stated through a decree of the Chairman.

Chapter Four

Section One

The Financial Sector- Tasks and Responsibilities

Article 16: The Financial sector shall have the following tasks and responsibilities:

1. Revising annual plans for the implementation of financial statistical activities and assessing the implementation process
2. Creating assessing and updating statistical systems for the collection of financial data (i.e. Agriculture, fisheries, industry, power, water, construction, environment, transportation, telecommunication and trade)
3. Building statistical models and technical guide lines regarding the collection of data (through censuses and surveys) in the financial sector in collaboration with related government institutions
4. Designing statistical frames and output tables and reports for all financial statistics activities and assessing and updating them continuously in light of domestic developments and international experience, in collaboration with the automation and studies sector
5. Building and updating statistical themes and terminology used in the financial statistics in light of other countries experience
6. Collecting current financial data on a regular basis through surveys and censuses.
7. Collecting primary statistical data on a regular basis in light of on going assessment of current statistics and the experience of other countries and international statistical organizations
8. Designing classification systems and guides on financial statistics on a regular basis in light of continuous assessment of running activities and the experience of other countries and international statistical organizations.
9. Regular studying and assessing all financial data and indicators according to technical guidelines of statistical activity in this sector
10. Corresponding and coordinating with statistical units in other ministries related to financial statistics, to assist those units in developing their statistical activities
11. Publishing statistical periodicals covering all outputs of the statistical activities in the financial sector
12. Preparing the National accounts estimation both preliminary and final, and balance of goods, in light of detailed data from sources and in collaboration with other General Directorates of the CSO
13. Preparing resources and consumption estimates and estimating private and government capital and consumption in collaboration with all directorates on the CSO.
14. Estimating the added value, total and net, by sector, by salaries and compensation and by net and total revenue.
15. Preparing annual estimation of gross national product (GNP) from sources and estimates and estimating publish and private sector consumptions and investment on capital and reserves.

16. Collection and classifying and analyzing detailed statistical data about the financial and insurance sectors and current and investment accounts of the government's general budget on the income and expenditure sides and the monetary and bank statistics and all the other statistics that serve the planning and development needs.
17. Cooperating and collaborating with all sources of data need to prepare the national accounts estimation and the Gross national Product and all institutions responsible for the financial and funding and monetary policies and those supervising foreign trade and the balance of payments and other related parties.
18. Preparing and publishing statistical periodicals and following up all publications on national accounts and financial statistics domestically and internationally and reporting about them
19. Filling all data gaps that are vital for studies and analysis on economics
20. Any other tasks mandated by the nature of the post by law or by the CSO leadership

Section TWO

Tasks and Responsibilities of the social and Population Sector

Article 17: The social and population statistics sector will have the flowing tasks and responsibilities:

1. Preparing regular plans for the conduct of social and population studies and assessing their implementation on a regular basis
2. Devising statistical systems and technical instructions related to the collection of social and population data and updating them regularly.
3. Building statistical models and technical specifications needed for the collection pf primary statistical data on the social and population sectors
4. Designing statistical frames and output tables and reports for all social and population activities and updating them in light of domestic developments and international experiences and in collaboration with the automation and studies sector.
5. Building and updating statistical themes and terminology used in social population statistics in the light of other countries experience.
6. Collecting current social and population statistics on a regular basis through surveys and censuses.
7. Designing and updating classification systems and guides on social and population statistics on a regular basis and in light of other countries experience.
8. Regularly studying and assessing all social and population data and indicators according to technical specifications governing this field.
9. Corresponding and collaborating with statistical units in other ministries related to social and population studies and providing assistance for the improvement of such units.
10. Publishing statistical periodicals covering output of all activities on social and population statistics.

11. Devising plans and programs and determining human and financial resources for the conduct of censuses and sample surveys, and preparing their budget in collaboration with other statistical entities.
12. Participating in the preparation of training and capacity building plans for staff of statistical census and surveys.
13. Studying plans and methodologies of census and surveys
14. Following up and implementing field operations of census and surveys according to statistical standards and assessing questionnaire and forms used.
15. Building methodologies on sample design for all surveys done by the CSO and others and drawing samples for all surveys done by CSO and others
16. Assessing the reliability level of frames used to draw samples for their comprehensiveness and precision, weights, and magnifying factors and assessing for implementation level of samples for all surveys done by CSO or others.
17. Producing statistical and census maps, classifying them, and archiving them, for use during other surveys and censuses.
18. Developing the Geographic Information System (GIS) in collaboration with other institutions
19. Filling any statistical gaps in data needed for studies and analysis on social and population level
20. Any other tasks mandated by the nature of work, by law or by the CSO leadership.

Section THREE

Tasks and responsibilities of the automation and Studies sector

Article 18: The automation and Studies Sector shall have the tasks and responsibility as follows:

- 1- Devising annual plans and programs to carry out sectors statistical duties
- 2- Determining the CSO's needs of automation equipment and computers, checking new equipment for conformation with delivery contracts, setting up new equipment and net working them, taking measures to control internal re arrangement and/or movement of equipment, except in certain cases.
- 3- Forming and implementing periodical maintenance programs, maintaining existing equipment, and providing technical support for CSO's offices and other statistical activities.
- 4- Technically assessing the storage methods of logistics of this sector and assuring continuous and timely supply of logistics to guarantee the continuity of work in the field.
- 5- Reporting to the CSO's leadership about the equipments used, building staff capacities in this field and proposing technical means to improve the performance of the existing equipment.
- 6- Proposing the annual budget related to maintenance and running of the equipment.
- 7- Building automated data base and network to benefit from data, and supervise its use.

- 8- Providing proposals on the general policy to provide the CSO's need of software and their use and conducting surveys on computers in collaboration with other statistical sectors, and developing the net work internally and externally to guarantee proper data flow.
- 9- Collaborating effort to protect the computer system from computer viruses and providing consultancy on the use of software.
- 10- Preparing studies on the build up of software suitable for statistical activities, assessing such software's performance, developing them, and conducting studies on performance and on database management and setting specifications and documents on programming and systems.
- 11- Programming statistical needs into software, electing programming software, developing software and preparing user manuals of such software and documenting the development of software.
- 12- Entering and editing data from surveys and censuses and other activities, research and studies and building output tables according to plans and providing other sectors and directorates with such output.
- 13- Storing data in a special library, controlling, monitoring use and monitoring copying of such data on a regular basis for back up purposes and granting access rights and use channels on data entry and exchange.
- 14- Preparing proposals for the creation of the administrative and enumeration frames and the specialized frames of all sectors.
- 15- Providing users of the administrative and enumeration frames with the data pertaining to such frames and with analytical studies about surveys and censuses.
- 16- Monitoring administrative division changes, in collaboration with the Ministry of Local Administration and other concerned parties and providing the necessary information about government, institution locations and providing technical support on:
 - * unifying themes and methodologies of statistical frames
 - * Studying the data base pertaining to statistical frames
 - * Designing and programming systems related to administrative and enumeration data
 - * Building of analytical software and of reporting software for the administrative and enumeration division.
- 17- Performing analytical studies on surveys and censuses of social and population nature to monitor changes of size, make up and distribution of demographic and social characteristics.
- 18- Performing studies on fertility, mortality and migration and the Labor Force in order to pin down determinants and effects on population.
- 19- Performing studies on health issues, mortality and indicators and determinants and their relationship to the society, in collaboration with related government institutions.
- 20- Performing automated documenting tasks for CSO activities in the following areas:
 - A. Studies and Reports.
 - B. Acts and decrees.

- C. Agreements and protocols.
- D. Computer output (tables, reports etc ...).
- E. Bibliographic data of countries and people.
- F. Supervising the Word processing activities.
- G. Documenting and sorting documents that makes up the basis for a CSO library.
- H. Preparing documentary publications

- 21- Participating in training activities of the CSO staff in automation and studies
- 22- Providing consultancy services for all statistical units within the CSO or outside in the area of automation and studies
- 23- Preparing periodic reports about sector's activities
- 24- Any other activities mandated by the nature of the sector. By the law or by the CSO leadership.

Section Five

Common Tasks of Sectors and General Directorates

Article 19: The following tasks are considered common tasks and all sectors and directorates shall perform them:

- 1. Preparing the annual plan of financial and human resources, each pertaining to their activities
- 2. Preparing periodic reports of activities, performances and accomplishments
- 3. Collaborating in planning and implementation and exchanging reports and information
- 4. Participating in plan building for the development of work and capacity building.
- 5. Precise implementation of information systems within the CSO
- 6. Participating in research, publicity and training efforts of the CSO
- 7. Directing proper use of equipment according to manufacturer's instructions
- 8. Implementing rules and guidelines outlined in section FOUR of this chapter.

Section FOUR

General guidelines of structural and implementation at the CSO

Article 20. For the purpose of better achievement of objectives, the CSO shall follow the following guidelines:

- 1. Implement modern and scientific methodology in directing and supervising operations, using the means of other practices that might be useful in planning and analyzing and problem solving efforts
- 2. The sectors and directorates of the CSO shall prepare plans on annual and seasonal basis for the implementation of tasks
- 3. The relationship between members of the CSO's leadership shall be based on co operation and continued collaboration

4. Organizational relationships are based on the hierarchy of tasks and powers without jeopardizing the approved guidelines of cooperation and consultancy for achievement of goals
5. The CSO will within its structure work on the basis of giving real powers to its general directorates in order to further develop management and administrative reform
6. The CSO's leadership will use continuous collaboration in all planning, assessment and implementation stages of its activities with internal telecom development being a main goal.
7. The CSO leadership will precisely determine the scope of each department within its structure to serve the balance between responsibility and powers.
8. The administrative leaders by nature of their posts are responsible for training of staff under them, in addition to their tasks of guiding, supervising and monitoring their activities in their respective directorates.
9. The CSO shall build a qualified and specialized team of staff to serve its purposes.
10. Implement the reward/ punishment methodology within the scope of the Civil service act and based solely on the staff performance.
11. All departmental bodies of the CSO shall collect and analyse data, each in its area, as a means of making decision on solid ground.
12. Each member of the staff shall when performing a task not mention herewith-inform his superiors before taking a decision.

Chapter Five

Closing

Article 21. The CSO is the only government institution responsible for collecting, processing, disseminating and publishing statistical data. The CSO will give published figures the official status after approving such figures and approving the process of data collection using field surveys or by obtaining data from other government institutions or private legal entities, who are obliged by law to answer CSO data requests.

Article 22. Users and stake holders of the CSO's data are prohibited by law from altering or processing the CSO data in way that will change the outcome of such data.

Article 23. The CSO Chairman shall pay special attention to the development and/or simplification of the CSO's activities, especially by giving authorities and powers to his staff in the head quarters and in the branches.

Article 24 The branch offices of the CSO shall hold the status of a general directorate or a directorate based on the activity size, and on the collaboration with the ministry of Civil services.

Article 25. The Minister shall based on the Chairman's proposal and after coordinating with the Ministry of Civil service, issue a decree that will govern the work at the headquarters and branch offices

Article 26. The Minister based on the CSO chairman's proposal and after approval of the Ministry of Civil Service, shall issue a decree that outlines the tasks and authorities of the general directorates of the CSO.

Article 27. The internal reference guidelines governing the CSO activities will also be issued by Minister's decree based on the Chairman's proposal and after approval from the Ministry of Civil service.

Article 28. The Chairman can issue decrees to join a sub directorate with another or establish a new one, in light of the administrative control guide lines.

Article 29 The Chairman can issue any decision aiming at the implementation of this act in decrees, in light of the respective administrative control guidelines.

Article 30 This act shall be valid and shall be implemented from the day it is issued and shall be published in the government's official newspaper.

Issued at the Republican presidency Office
This 1st day of November 2003

HE Ahmed Soofan
Minister of Planning and
International Cooperation

HE Abdulkader BaJamal
The Prime Minister

H E Ali Abdullah Saleh
The president of the Republic of Yemen

Annex IV: Millennium Development Goals, targets and indicators (DESA Technical Version identifying data sources)

Goals and targets (from the Millennium Declaration) Indicators for monitoring progress

Goal 1. Eradicate extreme poverty and hunger

Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day

1. Proportion of population below \$1(PPP) per day (World Bank)^{a/}
2. Poverty gap ratio (incidence x depth of poverty)(World Bank)
3. Share of poorest quintile in national consumption (World Bank)

Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger

4. Prevalence of underweight children under five years of age (UNICEF - WHO)
5. Proportion of population below minimum level of dietary energy consumption (FAO)

Goal 2. Achieve universal primary education

Target 3. Ensure that, by 2015, children everywhere,

6. Net enrolment ratio in primary education boys and girls alike, will be able to (UNESCO) complete a full course of primary schooling
7. Proportion of pupils starting grade 1 who reach grade 5 (UNESCO)
8. Literacy rate of 15-24-year-olds (UNESCO)

Goal 3. Promote gender equality and empower women

Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015

9. Ratios of girls to boys in primary, secondary and tertiary education (UNESCO)
10. Ratio of literate females to males 15-to- 24-year-olds (UNESCO)
11. Share of women in wage employment in the non-agricultural sector (ILO)
12. Proportion of seats held by women in national parliament (IPU)

Goal 4. Reduce child mortality

Target 5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate

13. Under-five mortality rate (UNICEF – WHO)
14. Infant mortality rate (UNICEF - WHO)
15. Proportion of 1-year-old children immunized against measles (UNICEF - WHO)

Goal 5. Improve maternal health

Target 6. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

16. Maternal mortality ratio (UNICEF – WHO)
17. Proportion of births attended by skilled health personnel (UNICEF - WHO)

Goal 6. Combat HIV/AIDS, malaria and other diseases

Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS

18. HIV prevalence among 15-to-24-year-old pregnant women (UNAIDS, UNICEF, WHO)
19. Condom use rate of the contraceptive prevalence rate ^{b/} (UNICEF, UN Population Division)
20. Number of children orphaned by HIV/AIDS ^{c/}(UNICEF)

Target 8. Have halted by 2015 and begun to reverse the

- 21. Prevalence and death rates associated with malaria incidence of malaria and other major diseases (WHO)
- 22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures d/ (UNICEF - WHO)
- 23. Prevalence and death rates associated with tuberculosis (WHO)
- 24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course (DOTS) (WHO)

Goal 7. Ensure environmental sustainability

Target 9. Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources

- 25. Proportion of land area covered by forest (FAO)
- 26. Ratio of area protected to maintain biological diversity to surface area (UNEP -IUCN)
- 27. Energy use (kg oil equivalent) per \$1 GDP (PPP) (IEA, UNSD, World Bank)
- 28. Carbon dioxide emissions (per capita) (UNFCCC,UNSD) and consumption of ozone-depleting CFCs (ODP tons) (UNEP-Ozone Secretariat)
- 29. Proportion of population using solid fuels (WHO)

Target 10. Halve by 2015 the proportion of people without sustainable access to safe drinking water

- 30. Proportion of population with sustainable access to an improved water source, urban and rural (UNICEF – WHO)

Target 11. By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers

- 31. Proportion of urban population with access to improved sanitation (UNICEF – WHO)
- 32. Proportion of households with access to secure tenure (owned or rented) (HABITAT)

Goal 8. Develop a global partnership for development

Target 12. Develop further an open, rule -based, predictable, *Some of the indicators listed below are monitored non-discriminatory trading and financial system separately for the least developed countries (LDCs),Africa, landlocked countries and small island developing States*

Includes a commitment to good governance, development, and poverty reduction — both nationally and internationally **Official development assistance**

Target 13. Address the special needs of the least developed countries

- 33. Net ODA, total and to LDCs, as percentage of OECD/DAC donors' gross national income (OECD)
Includes: tariff and quota free access for least developed countries' exports; enhanced program of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction
- 34. Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation) (OECD)
- 35. Proportion of bilateral ODA of OECD/DAC donors that is untied (OECD)

Target 14 Address the special needs of landlocked countries

- 36. ODA received in landlocked countries and small island developing States as proportion of their GNIs (OECD) (through the Program of Action for the Sustainable Development of Small Island
- 37. ODA received in small island developing States Developing States and the outcome of the as proportion of their GNIs (OECD) twenty-second special session of the General Assembly)

Market access

Target 15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term

38. Proportion of total developed country imports (by value and excluding arms) from developing countries

and from LDCs, admitted free of duties (UNCTAD)

39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from

developing countries (UNCTAD)

40. Agricultural support estimate for OECD countries as percentage of their GDP (OECD)

41. Proportion of ODA provided to help build trade capacity ^{e/} (OECD, WTO)

Debt sustainability

42. Total number of countries that have reached their HIPC decision points and number that have reached

their HIPC completion points (cumulative) (IMF - World Bank)

43. Debt relief committed under HIPC initiative, US\$ (IMF - World Bank)

44. Debt service as a percentage of exports of goods and services (IMF - World Bank)

Target 16. In cooperation with developing countries,

45. Unemployment rate of 15-to-24-year-olds, each develop and implement strategies for decent and sex and total (ILO)^{f/} productive work for youth

Target 17. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries

46. Proportion of population with access to affordable essential drugs on a sustainable basis (WHO)

Target 18. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications

47. Telephone lines and cellular subscribers per 100 population (ITU)

48. Personal computers in use per 100 population (ITU) and internet users per 100 population (ITU)

Footnotes:

a/ For monitoring country poverty trends, indicators based on national poverty lines should be used, where available.

b/ Amongst contraceptive methods, only condoms are effective in preventing HIV transmission. The contraceptive prevalence rate is also useful in tracking progress in other health, gender and poverty goals. Because the condom use rate is only measured amongst women in union, it will be supplemented by an indicator on condom use in high risk situations. These indicators will be augmented with an indicator of knowledge and misconceptions regarding HIV/AIDS by 15-24 year-olds (UNICEF – WHO).

c/ To be measured by the ratio of proportion of orphans to non orphans aged 10-14 who are attending school.

d/ Prevention to be measured by the % of under 5s sleeping under insecticide treated bednets; treatment to be measured

by % of under 5s who are appropriately treated

e/ OECD and WTO are collecting data that will be available from 2001 onwards.

f/ An improved measure of the target is under development by ILO for future years

ANNEX V: The UN Fundamental Principles of Official Statistics

At its special session held in New York from 11-14 April 1994, the Statistical Commission adopted the fundamental principles of official statistics, as set out in ECE decision C (47), but incorporating a revised preamble. An extract from the report * containing the preamble and principles, as adopted is given below.

FUNDAMENTAL PRINCIPLES OF OFFICIAL STATISTICS

The Statistical Commission,

Bearing in mind that official statistical information is an essential basis for development in the economic, demographic, social and environmental fields and for mutual knowledge and trade among the States and peoples of the world,

Bearing in mind that the essential trust of the public in official statistical information depends to a large extent on respect for the fundamental values and principles, which are the basis of any society, which seeks to understand itself and to respect the rights of its members,

Bearing in mind that the quality of official statistics, and thus the quality of the information available to the Government, the economy and the public depends largely on the cooperation of citizens, enterprises, and other respondents in providing appropriate and reliable data needed for necessary statistical compilations and on the cooperation between users and producers of statistics in order to meet users' needs,

Recalling the efforts of governmental and non-governmental organizations active in statistics to establish standards and concepts to allow comparisons among countries,

Recalling also the International Statistical Institute Declaration of Professional Ethics,

Having expressed the opinion that resolution C (47), adopted by the Economic Commission for Europe on 15 April 1992, is of universal significance,

Noting that, at its eighth session, held at Bangkok in November 1993, the Working Group of Statistical Experts, assigned by the Committee on Statistics of the Economic and Social Commission for Asia and the Pacific to examine the Fundamental

* Official Records of the Economic and Social Council, 1994, Supplement No. 9 (E/1994/29), chap. V.

Principles, had agreed in principle to the ECE version and had emphasized that those principles were applicable to all nations,

Noting also that, at its eighth session, held at Addis Ababa in March 1994, the Joint Conference of African Planners, Statisticians and Demographers, considered that the Fundamental Principles of Official Statistics are of universal significance,

Adopts the present principles of official statistics:

1. Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

2. To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

3. To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

4. The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

5. Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

6. Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

7. The laws, regulations and measures under which the statistical systems operate are to be made public.

8. Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

9. The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

10. Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.