

NATIONAL STATISTICS DEVELOPMENT STRATEGY (NSDS)



National Statistics Bureau
Royal Government of Bhutan

October 2008

TABLE OF CONTENTS

EXECUTIVE SUMMARY	- 5 -
1 INTRODUCTION	- 8 -
2 BACKGROUND	- 9 -
2.1 Economic and social background.....	- 9 -
2.2 The 10 th Five Year Plan (2008 - 2013).....	- 9 -
2.3 Specificities of Official Statistics in small countries	- 9 -
3 SYNTHESIS OF THE ASSESSMENT REPORT	- 11 -
4 BSS MISSION AND VISION.....	- 13 -
4.1 BSS Mission.....	- 13 -
4.2 BSS Vision	- 13 -
4.3 BSS partners and BSS stakeholders	- 14 -
5 BSS STRATEGIC OBJECTIVES	- 15 -
5.1 Strategic objective 1: Define and implement a legal and policy framework for the development of Official Statistics.....	- 16 -
5.2 Strategic objective 2: Develop the BSS staff capacity, efficiency and career satisfaction.....	- 17 -
5.3 Strategic objective 3: Make an efficient use of the BSS technical and financial resources...	- 18 -
5.4 Strategic objective 4: Increase the Official Statistics availability to fulfill the user needs....	- 19 -
5.5 Strategic objective 5: Offer the users an easier access to the data	- 26 -
6 ACTION PLAN FOR 2009-2013	- 27 -
6.1 Component 1: Strengthening the Official statistics legal framework and governance, and the management of the BSS resources.....	- 28 -
6.2 Component 2: the BSS statistical production	- 35 -
6.3 Component 3: the BSS statistical dissemination.....	- 47 -
7 NSDS IMPLEMENTATION	- 51 -

7.1	Mechanisms for implementing	- 51 -
7.2	Monitoring and evaluation	- 51 -
7.3	Risks.....	- 51 -
7.4	Sustainability.....	- 52 -
	ANNEXES	- 53 -

ABBREVIATIONS AND ACRONYMS

BHMIS	Bhutan Health Management Information System
BLSS	Bhutan Living Standard Survey
BSS	Bhutan Statistical System
CBS	Centre for Bhutan Studies
DHS	Demographic and Health Survey
DoA	Department of Agriculture
DoL	Department of Livestock
DQAF	Data Quality Assessment Frameworks
DSO	Dzongkhag Statistical Officer
FYP	Five Year Plan
GDDS	General Data Dissemination System
GNH	Gross National Happiness
GDP	Gross Domestic Product
HIES	Household Income and Expenditure Survey
IMF	International Monetary Fund
LFS	Labour Force Survey
LSMS	Living Standards Measurement Study
MDGs	Millennium Development Goals
MoA	Ministry of Agriculture
MoE	Ministry of Education
MoEA	Ministry of Economic Affairs
MoF	Ministry of Finance
MoH	Ministry of Health
MoHCA	Ministry of Home and Cultural Affairs
MoIC	Ministry of Information and Communication
MoLHR	Ministry of Labour and Human Resources
MoWHS	Ministry of Works and Human Settlement
NHS	National Health Survey
NSB	National Statistics Bureau
NSDS	National Statistics Development Strategy
NSS	National Statistical Service
NSTC	National Statistics Technical Committee
PHCB	Population and Housing Census of Bhutan
PPD	Policy & Planning Division
RCSC	Royal Civil Service Commission
RMA	Royal Monetary Authority
RNR	Renewable Natural Resources
SAARC	South Asian Association for Regional Co-operation
TWG	Technical Working Group
USAID	United States Agency for International Development

Executive Summary

The Bhutan Statistical System (BSS) is a decentralised system with a central agency, the National Statistics Bureau (NSB). In order to improve the coordination and strengthen the capacity of the Bhutan Statistical System (BSS), the NSB has initiated the development of a National Statistics Development Strategy (NSDS) with the support of the World Bank Trust Fund for Statistical Capacity Building in order to improve the coordination and strengthen the capacity of the Bhutan Statistical System (BSS) to meet the user data needs. The BSS is still fragile due to the lack of human resources, the absence of legal framework for the statistical activities, some data weaknesses and a poor coordination. It does not offer the users an easy access to the data as desired.

The NSDS is consistent with Bhutan's overall development vision of Gross National Happiness and especially its 5-year Action Plan are fully integrated in the 10th Five Year Plan (FYP). The NSDS also supports the 10th FYP as it has taken into account the data needed for the monitoring and evaluation of the plan, especially the macro economic and sectoral indicators¹.

The NSDS takes account of Official Statistics specificities applying to small country when proposing technical solutions to produce the requested data: priority is given to administrative data sources compilation rather than data collection through large and costly survey; the use of new statistical techniques like poverty mapping or small area estimations is also emphasised.

The NSDS outlines the mission, vision, strategic objectives and strategies determining the successful achievement of the objectives. It is supported by a 5-year implementation action plan.

The BSS Mission

1. The statistical organization and units at all administrative levels of the government that jointly collect, process and disseminate Official Statistics on behalf of the government constitute the Bhutan Statistical System (BSS).
2. The BSS provides Official Statistics on the economic, demographic, social, cultural and environmental situations and trends, using methodologies and quality complying with the international standards.
3. The BSS provides Official Statistics that meet both the national and international requirements.
4. The BSS offers the users an easy access to the Official Statistics through a streamlined and dynamic dissemination system.

The BSS Vision

The BSS is a well-coordinated system that professionally produces timely, reliable, accurate, consistent Official Statistics for supporting evidence-based planning and decision making to achieve the Gross National Happiness.

The BSS Strategic objectives and their strategies

1. Define and implement a legal and policy framework for the development of Official Statistics.
 - Finalisation and adoption of the Statistics Act.
 - Implementation of the Statistics Act and development of the BSS procedures for coordination and cooperation in the framework of the Statistics Act.
2. Develop the BSS staff efficiency and career satisfaction.

¹ Refer to "The Assessment of the Bhutan Statistical System (BSS) Report", Annex 4.

- Development of a global BSS human resource policy in cooperation with the Royal Civil Service Commission (RCSC): The management of the BSS technical staff is centralised in NSB under a “National Statistical Service”.
 - Improvement of the skills of the BSS staff.
3. Make an efficient use of the technical and financial resources across the BSS.
 - Development of a BSS-wide financing strategy for the Official Statistics.
 - Rationalisation of the use of technical resources across the BSS.
 4. Increase the Official Statistics availability to fulfil the user needs.
 - Implementation of a BSS multi annual program of surveys and censuses.
 - Development of the use of administrative data sources.
 - Strengthening the National accounts.
 - Streamlining the dataflow among the data producers.
 - Management of the data quality.
 5. Offer the users an easier access to the data.
 - Development and implementation of a BSS coordinated dissemination policy.
 - Improve the quantity and timeliness of the Official Statistics available to the users
 - The NSB as focal point for the data dissemination to the users.

The Action Plan

The Action Plan is an operational plan that implements in an integrated and coherent way the selected strategies during the 2009-2013 five-year period. It fits in the NSB/01 program of the 10th FYP (“Strengthening of National Statistical System”). The action plan consists of three components:

- i. The BSS capacity-building.
- ii. The BSS statistical production.
- iii. The BSS statistical dissemination.

The ***BSS capacity-building*** component will ensure that the BSS has a legal framework enabling the development of the Official Statistics in Bhutan. It will organise a coordinated implementation of the statistical activities by the BSS partners, based on the BSS annual work program. The pooling of human resources in the National Statistical Service and the technical and financial resources within the BSS proposed framework will increase the efficient use of these limited resources. Statistical training of the staff will be organised for the entire BSS.

The ***BSS statistical production*** component defines the statistical products that the BSS plans to deliver during the 2009-2013 period, and the statistical operations implemented. Although Bhutan has not subscribed to the General Data Dissemination System (GDDS), the set of statistics stated in the GDDS as essential for all countries for policymaking and analysis, along with the data needs identified during the assessment phase were used as a reference framework to define the Officials Statistics that the BSS should deliver to its users. The priorities have been set according to the needs expressed by the users. Due to the cost efficiency of the use of administrative data sources, priority will be given to the compilation of these data to enlarge the scope of statistical data. Other solutions like surveys will only be selected if the compilation of none of the existing administrative sources is able to deliver the expected data with the quality required. Based on the international recommendations, on the user needs and the past and current BSS data collection practices, a 10-year program of surveys and censuses has been defined. It includes some surveys jointly implemented by several BSS partners. The BSS statistical production component integrates the surveys and censuses of the first five years. It also plans to develop the use of administrative data sources, to strengthen the business statistics and the national accounts, to streamline the data exchanges between the producers, to extend the scope of the analysis of data and to initiate the management of the quality of the Official Statistics.

The **BSS dissemination** component objective is to offer the users an easier access to an increasing amount of available data. A BSS common dissemination policy will define the framework for the development of the Official Statistics dissemination and put in place some common tools. The improvement of the timeliness of the NSB and sectoral statistical publications is also a priority, as well as the dissemination of existing data. The NSB will develop its role as focal point for the dissemination of the Official Statistics to the users.

The National Statistics Technical Committee (NSTC) will monitor the implementation of the NSDS through the Action Plan. The Action plan will be the technical and financial reference framework for the BSS annual work programs. Annual reporting and final assessment of the Action Plan will enable the NSTC to make necessary adjustments to the NSDS.

The adoption of the Statistics Act early at the beginning of the Action Plan will signify strength of support from the Government and the National Assembly to the development of the BSS. The highest risks that could compromise the NSDS implementation are the inability to secure its funding and the departure of a significant number of staff, especially the most qualified, for long-term training or for other positions outside the BSS.

1 Introduction

After several restructurings since the creation of the first statistical cell in the early 1970s, the Bhutan Statistical System is a decentralised system with a central agency, the National Statistics Bureau (NSB). However, bewildering array of reporting frameworks, which are often inconsistent and several ministries involved in collecting information at the local level as input to their sector management Information Systems, it has posed numerous difficulties both to the respondents as well as to the government.

As such, intervention is needed to improve the coordination and to build capacity to a level that can meet the current national statistical requirements. Thus, the NSB has initiated the development of a National Statistics Development Strategy (NSDS) with the support of the World Bank Trust Fund for Capacity Building.

The NSDS provides a framework and action plan for building the statistical capacity to meet both current and future data needs. In particular, the aim is to align the statistical development strategy with wider poverty-focused national development programs and strategies. As a result, the Bhutan's NSDS will be consistent with Bhutan's overall development vision as articulated by Gross National Happiness and the 10th Five Year Plan (FYP).

The strategy is supported by a 5-year implementation action plan with full costing, considering the capacity building needs and human resource requirements, as well as the demand for data of the different users.

The first step of the NSDS preparation has been the overall assessment and diagnosis of the Bhutan statistical system (BSS) in relation to the demand for data from the different users. Based on this assessment, the NSDS has been developed in close collaboration with a technical working group (TWG). The TWG was chaired by the Director of NSB and composed of appointed technical staff from key Government institutions. The Strategy is nationally owned and led, and covers the whole BSS, including both statistical and administrative sources from relevant line ministries and all data collecting units. The NSDS will serve as a framework for the development of statistics for various sectors.

A draft NSDS proposal was submitted for review and discussion to all the stakeholders during a consultative workshop. Based on the recommendations of the workshop, the NSDS has been revised and updated accordingly.

2 Background

2.1 Economic and social background

Bhutan is a small kingdom in the eastern Himalayas, extending over an area of 38,394 square kilometres. The country is bordered by India and China. Despite being landlocked, with difficult terrain and a widely dispersed population of about 671,083 in 2008, Bhutan has made rapid socioeconomic progress. The country's real annual economic growth averaged about 7-8 per cent over the last two decades and grew by 8.5 per cent in 2006. Bhutan's per capita Gross Domestic Product has risen from \$239 in 1980 to \$1,414 in 2006.

Hydropower development and the export of surplus electricity to India has largely sustained this robust growth and fundamentally transformed the structure of Bhutan's economy. Through prudent macroeconomic management, the country is performing well and the Government's investment in social and human development has raised hopes of Bhutan meeting several of the Millennium Development Goals.

However, despite strong pro-poor development policies and interventions, poverty continues to be a serious concern. The "Poverty Analysis Report 2007" produced by the NSB reveals that 23.2 % of the total population falls below the national poverty line.

2.2 The 10th Five Year Plan (2008 - 2013)

As with the past Plans, the overall thrust of the Tenth Plan is to improve the quality of life of the people and the development philosophy of Gross National Happiness (GNH) shall continue to guide Bhutan's development process. The four pillars of GNH, therefore, form the core values for the Tenth Plan: i) Promotion of equitable and sustainable socioeconomic development, ii) Preservation and promotion of cultural values, iii) Conservation of the natural environment, and iv) Good governance.

Poverty Reduction is the main development priority for the 10th FYP, which is under finalisation. The focus on poverty reduction is consistent with the Royal Government's international commitments such as the Millennium Development Goals (MDGs), and the declaration of 2006-2015 as the Decade of Poverty Alleviation of South Asian Association for Regional Co-operation (SAARC).

Four key strategies have been identified to achieve the overall goal of poverty reduction: rural development, promoting balanced regional development, private sector development and infrastructure development.

The NSDS and especially its Action Plan are fully integrated in the 10th FYP. One of the programs of the 10th FYP is "Strengthening of National Statistical System". This program has planned that the NSB will "develop and implement Statistical Master Plan that will be used as a blueprint for designated statistics in the country". The NSDS and its Action Plan would answer to this requirement.

The NSDS also supports the 10th FYP as it has taken into account the data needed for the monitoring and evaluation of the FYP, especially the macro economic and sectoral indicators used to monitor the plan².

2.3 Specificities of Official Statistics in small countries

The NSDS takes account of Official Statistics specificities applying to small country. The statistical data needed in small countries for policy management at national, sector and local levels are quite the same as in bigger countries. But the production of these data represents for small countries a bigger effort, as measured by the yearly cost of Official Statistics activities per capita. This is one of the

² Refer to "The Assessment of the Bhutan Statistical System (BSS) Report", Annex 5.

reasons why the Official Statistics are mainly produced from administrative data records in the most developed small countries. The management of these administrative records is easier in smaller countries than in bigger ones. However, to face the budget constraints and the increasing demand for data, the current trend in most of the National Statistical Systems is to develop the use of administrative data sources for Official Statistics compilation.

Administrative data sources are already used in Bhutan to produce figures in some specific areas: external trade, finance, money, health, and education statistics. However, like in other small developing countries, the development of some other administrative data records has often not yet reached a level of quality and coverage that enables their compilation for statistical purpose, eg. civil registration and business registration. The sample surveys keep an important role to produce data about the entire population. When there is a need for data at national and local level (in the case of Bhutan, mainly dzongkhag level), the data produced by the surveys must be significant at that local level. Therefore, the size of the sample must be increased. In countries like Bhutan, the representativeness of the results for the smallest dzongkhags cannot be ensured: less populous regions still have too small subsample sizes to make any reliable inferences about them³. As a result, the sample rate in the small countries is generally higher and the surveys are proportionally more expensive than in bigger countries.

The NSDS development process has taken care of this specific situation when proposing technical solutions to produce the requested data.

³ Other methodologies should be used in that case based on small areas estimation methods or poverty mapping.

3 Synthesis of the Assessment Report

The results of the assessment phase are presented in the assessment report, which identifies the underlying main issues that the NSDS should address as well as elements already in place on which the BSS should build its future developments.

Strength of the BSS

The BSS strength mainly relies on the success of some symbolic data collections events such as the Population & Housing Census of Bhutan (PHCB) 2005, the BLSS 2003 and 2007 and the improvement in the range and quality of data produced by many administrative sources.

The PHCB 2005 represents a great progress as it provides a good basis for the collection of many other data, especially using household surveys.

All categories of users expressed that important progress has been made in producing and disseminating statistical data during the last years.

This has been possible through the repeated efforts to improve the BSS by allocating sufficient amount of funding for statistical operations supported by the willing and highly motivated staff.

Weaknesses of the BSS

The assessment has identified four main weaknesses:

- The lack of human resources: insufficient number of staff, lack of suitable skills for a majority of the statistical staff, and a great risk to lose the most qualified staff due to the limited career opportunities offered within the statistical agency.
- The absence of a legal framework for the statistical activities, which should empower the BSS to undertake its statistical activities, while guaranteeing the users with the professionalism of the staff and confidentiality of the data.
- Some data weaknesses: there is a need to improve the reliability regularity, scope and coverage of some data to produce the indicators needed to implement and monitor the national and sector policies.
- The difficulties encountered by the users to access the data: data scattered across several individual producers offices and not organised with regard to data dissemination; low level of understanding of the data technicalities due to a lack of analytical usage and metadata importance.

Above all, the lack of coordination within the BSS is a crosscutting issue, which should be addressed. It results in inconsistency of data, concepts and definitions between several data sources, duplication of data collections and limited exchange of data between the producers.

Opportunities offered to the BSS

The BSS currently enjoys a favourable environment for its development. It receives support from its stakeholders in all the Ministries and from donors in order to provide the data needed to prepare, implement and monitor the government policies.

There is an increasing awareness for statistics among the Bhutanese society and the unanimous agreement for the need of good statistics, reliable, accurate and timely data, which is fundamental to providing a strong foundation for an evidence based planning process.

Because of the decentralisation process there is an increasing demand of local data, mainly at Dzongkhag and Gewog levels.

Threats of the BSS

However, statistics do not always provide good news to the society when they point out important issues. Some statisticians are sceptical about the permanence of the acceptability of the data by the users and decision makers in this context.

The BSS development comes within the scope of the government policy and budget constraints. These constraints and especially the proposed “zero-growth” of the number of staff planned in the 10th Five Year Plan may appear as an obstacle in the BSS for future developments and the fulfilment of user needs. An unbalanced funding of the data collection between national budget and donors is feared as it might increase the donor’s pressure for specific data collection.

The results of this BSS assessment provide evidence for the development of potential strategies that can improve the functioning of the sectors and of the BSS as a whole.

4 **BSS Mission and Vision**

4.1 **BSS Mission**

A mission answers the question: **what is our business** and why do we exist as an agency or a system.

It provides the basis for priorities, strategies, plans and work assignments.

The mission statement should describe the purpose, customers, products or services, markets, philosophy and basic technology used by the statistical system to realise its vision.⁴

Mission

1. The statistical organization and units at all administrative levels of the government that jointly collect, process and disseminate Official Statistics on behalf of the government constitute the Bhutan Statistical System (BSS).
2. The BSS provides Official Statistics on the economic, demographic, social, cultural and environmental situations and trends, using methodologies and quality complying with the international standards.
3. The BSS provides Official Statistics that meet both the national and international requirements.
4. The BSS offers the users an easy access to the Official Statistics through a streamlined and dynamic dissemination system.

4.2 **BSS Vision**

The **vision**, which seeks to create a compelling picture of the desired future state that often represents a quantum leap from the past and present, answers the overarching question: **What do we want to become** in the longer-term, perhaps 5–10 years from now?

Vision

The BSS is a well-coordinated system that professionally produces timely, reliable, accurate, consistent Official Statistics for supporting evidence-based planning and decision making to achieve the Gross National Happiness.

⁴ This box and the following ones are extracted from:

A guide to designing National Strategy for the Development of Statistics (NSDS). Paris21 Secretariat. November 2004.

4.3 BSS partners and BSS stakeholders

Four specific groups of stakeholders of the BSS are identified:

- Users of Official Statistics,
- Producers of Official Statistics
- Providers of the raw data on which Official Statistics are based.
- Wider stakeholders and society as a whole: Parliament, development partners, NGOs, and the general public, but also specific wider interest groups such as employers, trade unionists or professional societies.

For an easier understanding, we will name “BSS partners” the producers of Official Statistics in the following pages.

5 **BSS strategic objectives**

Having established where a national statistical system is and where it wants to get to, the next step is to identify the alternative ways in which the desired goals can be reached.

The strategic planning exercise involves identification of **strategic goals** (overall accomplishments to be achieved) and **strategies** (overall methods for achieving stated goals and the vision).

Strategic goals aim to address strategic or important issues, which will have been identified during the assessment phase. The goals should be creative and forward-looking. As much as possible, they should be well defined and **SMART** (**S**pecific, **M**easurable, **A**chievable, **R**elevant and **T**ime bound).

Strategic objectives

1. Define and implement a legal and policy framework for the development of Official Statistics.
2. Develop the BSS staff efficiency and career satisfaction.
3. Make an efficient use of the technical and financial resources across the BSS.
4. Increase the Official Statistics availability to fulfil the user needs.
5. Offer the users an easier access to the data.

The following paragraphs describe the content of each strategic objective and present the selected strategies to go towards each one.

The implementation of these strategies during the period 2009-2013 is described in the Action Plan.

5.1 Strategic objective 1: Define and implement a legal and policy framework for the development of Official Statistics.

5.1.1 Definition

A legal framework supportive for official statistics activities is finalized, adopted and implemented. The partnerships between the BSS stakeholders are developed.

5.1.2 Rationale

The lack of legal framework is an impediment to the development of the Official Statistics. A Statistics Act will enable an increasing coordination between the BSS partners as far as they build this cooperation on concrete activities.

5.1.3 Strategies

1. Finalisation and adoption of the Statistics Act

The objectives of the Statistics Act are:

- To entitle the Bhutan Statistical System (BSS), i.e. the NSB and the sector statistics units, to collect and disseminate the official statistics.
- To lay out the NSB's organizational structure.
- To strengthen coordination among the BSS partners and facilitate dialog with users.
- To define missions and composition of the National Statistics Technical Committee(NSTC).
- To organise exchange of data between the BSS partners and other providers of administrative data for statistical purposes.
- To encourage respondents to comply with the BSS's demands for information
- To guarantee the confidentiality of the information collected from the individual respondents.

The Statistics Act implements the Fundamental Principles of Official Statistics (see Annex 1), which have been endorsed by most of the countries as a reference framework for Official Statistics.

Bhutan needs to have such an act to secure the Official Statistics production and dissemination, and ensure users' trust in them. The Statistics Act has been drafted with the support of the ADB. It has to be finalised and discussed between the BSS partners. Finally, it should be submitted for adoption by the Government and the National Assembly.

2. Implementation of the Statistics Act and development of the BSS procedures for coordination and cooperation in the framework of the Statistics Act

The implementation of the Statistics Act will first focus on the following aspects:

- To promote the Act by the users and the data providers.
- To increase the BSS staff awareness about the Principle of Official Statistics.
- Nomination of the NSTC members.
- Organisation of the NSTC work: Planning of regular meetings and agenda framework.

The development of the coordination and the cooperation among the BSS partners (including via the NSTC) is a major issue for the Official Statistics future development. The coordination will rely on the implementation of common activities. Several topics should be put on this agenda:

- Adoption of the Official Statistics annual work programs and budgets.
- Harmonisation of concepts and methods.
- Dialogue between users and producers.
- NSDS implementation review and update.

5.2 **Strategic objective 2: Develop the BSS staff capacity, efficiency and career satisfaction.**

5.2.1 *Definition*

The BSS has the suitable human resources to fulfill its missions (the right persons for the right jobs) and uses its human resources efficiently. The BSS staff is more satisfied with his/her career.

5.2.2 *Rationale*

One of the major weaknesses identified during the assessment is that there is an insufficient number of staff to carry out the statistical activities and a lack of statistical skills among the staff. The statistical capacity should be supported by an efficient use of the available staff and through enhancement of qualification. The RCSC has in principle agreed to increase statistical staff and support in developing the professional capacity.

5.2.3 *Strategies*

1. ***Development of a global BSS human resource policy in cooperation with the RCSC: The management of the BSS technical staff is centralised in NSB under a “National Statistical Service”***

The BSS human resources need specific statistical skills. These skills are scarce and scattered among the BSS partners, with generally only one or two technical staff in the sector units. This situation has several negative consequences:

- There is no flexibility in the sector units to cope with increasing workload, such as the organisation of a survey.
- In small statistics units, there is often only one young statistician; in the current organisation, s/he cannot receive the support needed from professionals with higher qualification.
- There is no real career opportunity for the statisticians inside each statistical unit. A risk exists that part of the staff with the highest statistical skills leaves the BSS for better job opportunities.

A centralised BSS human resource management through setting up of a National Statistical Service (NSS) would limit the negative impact of this situation. The NSB will ensure the global management of this NSS, organising the mobility of the statistical human resources within the BSS according to the Official Statistics work program priorities. This kind of organisation is already adopted by the “National financial system”: all financial services staff being managed by the MoF.

At the Dzongkhag level, the use of the human resources ensuring the data collection should also be rationalized: the share of the work between the Dzongkhag Statistical Officer (DSO) and other Dzongkhag Sector Officers should promote the best use of the statistical skills.

2. *Improvement of the skills of the BSS staff*

There is a lack of statistical staff in BSS. Availability of statisticians are more difficult than other staff like economists for recruitment. Staff without statistics background need complementary training on statistical issues. The statisticians, who have already gained several years of experiences and showed the strongest capacities to support the BSS future developments, should be encouraged with fellowships to get higher qualifications (masters or PhD).

The BSS staff needs constant enhancement of technical capability to face the development of the statistical data production and carry out more in-depth analysis of the data. For every staff level, there are some specific training needs. A statistical training needs assessment of the BSS staff is a preliminary step for the development and the implementation of a BSS statistical training program. Staff training on general topics (communication, management, etc.) can be managed with the RCSC and the Ministries and agencies. But the technical staff training is the responsibility of the BSS. The more experienced BSS staff can ensure part of the training courses.

5.3 **Strategic objective 3: Make an efficient use of the BSS technical and financial resources**

5.3.1 Definition

The technical and financial resources allocated to the BSS are used in an efficient and coordinated way.

5.3.2 Rationale

The BSS has limited technical and financial resources and the surveys represent great investments for the country. The 10th FYP has not planned an important development of the financial resources dedicated to statistics. Therefore, the BSS must find ways to make the most efficient use of these resources.

5.3.3 Strategies

1. Development of a BSS-wide financing strategy for Official Statistics

The BSS annual work program defines the list of activities carried out during the year. A corresponding budget should be set up. It will present the overall budget for each activity and the contribution of every partner to its funding through its own budget.

The development of common statistical activities (surveys, analysis, publications, etc.) is one of the efficient ways to develop statistical activities. But this should not be hampered by different financial rules among the BSS partners or by the inability to have a unique financial management for some operations.

2. Rationalisation of the use of technical resources across the BSS

Some technical resources used for the production and dissemination of the Official Statistics are very expensive: they need specific equipments and staff with high level and specific skills. An example of such resources is the GIS technologies. The NSB is mastering these technologies and has the suitable equipments and the skilled staff. The NSB is in a position to offer these technologies to all the BSS partners in the framework of the BSS annual work program activities.

Technological choices of BSS partners should be harmonised in order to make easier exchange of data, skills and knowledge among the BSS partners.

The BSS partners should also pay great attention to an efficient use of the technical and financial resources at the dzongkhag level for the statistical activities. A specific budget line should exist in the dzongkhag budget for all the statistical activities managed by the DSO. This provision would secure the statistical activities in all the Dzongkhag.

5.4 Strategic objective 4: Increase the Official Statistics availability to fulfill the user needs

5.4.1 *Definition*

The BSS produces statistical data fulfilling the user needs, with priority given to national and sector policy needs.

5.4.2 *Rationale*

The existing statistical data do not fully satisfy users, although much progress has been made by the BSS. Some important data gaps have been identified during the assessments phase, especially to monitor the implementation of the MDG's, the SAARC development goals and the 10th FYP. The quality of some data does not meet the expectations with regard to the timeliness and the reliability criteria. Owing to a lack of exchange of data between the producers, existing data are not readily made available to the users. The BSS has to extend the scope of data available and the quality of data.

5.4.3 *Strategies*

The Official Statistics should offer to the users statistical data in various domains: economic, social, demographic, agriculture, gender, environment, cultural statistics and other necessary statistics. The General Data Dissemination System (GDDS) of the International Monetary Fund (IMF) has identified “a set of statistics recognized to be essential for all countries for policymaking and analysis in an environment that increasingly requires relevant, comprehensive, and accurate statistics”⁵. Although Bhutan has not subscribed to the GDDS, this set of statistics (see annex 2) can be used as a reference framework, along with the data needs identified during the assessment phase, to define the Officials Statistics that the BSS should deliver to its users. The priorities should be based on the needs expressed by the users.

The BSS assessment has shown there was some lack of data in certain areas. Therefore, the collection of new data should be carried out to fill these gaps. It can be done through the use of administrative data sources, surveys or censuses.

Users also expect the BSS to provide more analysis of the data delivered, beyond the description of the data compiled from administrative records or produced by a survey or census. Analysing and comparing data provided by various sources is also a way to assess and improve the quality of the data.

1. Development of the use of administrative data sources

Owing to cost efficiency of the use of administrative data sources, priority should be given to the compilation of these data to enlarge scope of statistical data. Administrative data sources often enable delivering statistical data at local level. Other solutions like surveys will only be opted if compilation of none of the existing administrative sources is able to deliver the expected data with the quality required.

Many administrative records are already compiled to provide statistical data in the following fields: health, education, employment, external trade, money, budget and finance.

The following table presents the use, currently made, of administrative data sources to produce statistical data, and proposed improvements for the future.

⁵ The General Data Dissemination System. Guide for participants and users. International Monetary Fund. 2007.

Operation	Resp.	Past situation					Improvements for future
		2005	2006	2007	2008		
1 Annual data compilation							
External trade	DRC				2007		Reliability, timeliness, IT Data processing
Employment (LMIS)	MoLHR		2006				Reliability, timeliness, coverage
Education (EMIS)	MoE		2007				IT data processing, coverage
Health (BHMIS)	MoH		2006				Reliability, timeliness
Transport	MoIC		2006				Publication, timeliness
Tourism	MoEA				2007		Publication, timeliness
Industrial licenses	MoEA		2006				Timeliness, coverage
Trade licenses	MoEA				2007		Publication, coverage
Energy	MoEA				2007		
Vital statistics	MoHCA					New	Reliability, coverage
Monetary statistics	RMA				2007		
Government finance statistics	MoF			2005-06			Timeliness, publication
2 Quarterly data compilation							
External trade	DRC						IT data processing, publication
Monetary statistics	RMA				12/2007		Timeliness
2 Monthly data compilation							
Electricity statistics	MoEA				01/2008		Publication
Tourism	MoEA				01/2008		Publication
Monetary statistics	RMA				01/2008		Timeliness

Several improvements will be done:

- Strengthening the processing of these data in order to increase their quality and enable a quicker delivery of the results: for example, use of standard software to process the external trade statistics.
- Publish the available statistical data.

Some administrative data sources are currently under development. They do not offer a complete coverage of their reference population. They cannot be used for statistical purpose. Nevertheless, the statistical data produced by these sources should be regularly assessed to support the improvement of the administrative sources and to check if they could be used to produce data for sub-populations. This is the case for the civil registration system, which should be used to produce the vital statistics.

In some other fields, the compilation of administrative records will be developed so as statistical data will be regularly published in the corresponding fields: tourism statistics, transport statistics, business statistics (using tax records), quarterly external trade statistics.

2. Implementation of a BSS multi annual program of surveys and censuses

The international organisations have developed a set of standard surveys, which can be used as references to cover most of the statistical data needs. They have made recommendations as regards the periodicity⁶ of these surveys. Their description and the suggested periodicities are presented in annex 3.

The frequency of the data delivery has to be decided according to the user needs and the BSS priorities. Surveys jointly implemented by several BSS partners should always be preferred to dedicated surveys managed by only one partner, if it is manageable. This solution is more resource efficient and it limits the overall response burden. For example, the yearly Labour Force Survey (LFS) is currently conducted by MoLHR. LFS is not conducted when there is a Bhutan Living Standard Survey (BLSS), as MoLHR uses the data collected during the BLSS. This, however, does not mean that the NSB will take charge of the implementation of the surveys previously conducted by the BSS partners.

⁶ The periodicity is referring to the frequency of the data collection.

The BSS program of surveys should also take account of the BSS technical and financial capability to carry out the statistical data collections and to process the data, and the potential donors support.

Based on these international recommendations, on the user needs and the past and current BSS data collection practices, a 10-year program of surveys and censuses has been defined. It is presented in the following table, which also includes a reminder of the past operations since 2000. A coordinated implementation of this program will efficiently ensure a regular coverage of the survey data needs.

Operation	Resp.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1. Censuses																				
Population and Housing Census (every 10 years)	NSB						PHCB													
RNR Census (every 10 years)	MoA																			
Livestock census (every year)	DoL, MoA																			
Manufacturing industries census	MoEA																			
Establishment census	MoLHR																			
2. Surveys																				
2.1 Multiannual																				
Bhutan Living Standard Survey	NSB / MoLHR	HIES			BLSS				BLSS											
National Health survey	MoH																			
Labour Force Survey	MoLHR									(ND)										
Demographic and health survey	NSB/MoH																			
Multisector survey	BSS																			
2.2 Annual																				
Establishment survey	MoLHR																			
Agriculture (crop) survey	DoA, MoA								(ND)	(ND)										
Labour Force survey (urban)	MoLHR											(1)		(1)		(1)		(1)		(1)
Business survey	NSB / MoLHR / MoEA																			
2.3 Half-yearly																				
Consumer Price survey	NSB																			
2.4 Quarterly																				
Consumer Price survey	NSB									2008Q1										
Production Price survey (manufacturing industries)	NSB																			
Survey on services	RMA						(ND)	(ND)	(ND)	(ND)										
2.5 Monthly																				

(ND) : no results are disseminated

(1) : During these years, the LFS will be included in the Multisector surveys

This program includes some operations that have already been carried out in the past years. It plans their repetition on a regularly basis:

- PHCB, every 10 years.
- RNR census, every 10 years.
- BLSS every 4 years.
- RNR survey, yearly.
- Consumer price index survey, quarterly.
- RMA survey on services, quarterly.

Two combined household surveys are included in the program: a demographic and health survey, and a multi-sector survey.

The demographic and health survey (DHS) will be conducted every 4 to 5 years. This survey will provide data at the nation level:

- all the main demographic indicators needed between two population and housing censuses: population per age, sex, marital status and nationality, birth, death, marriage, fertility, migrations, education, employment, parental survivorship and residence;
- households characteristics: source of drinking water, toilet facilities, cooking fuel, and assets of the household;
- the health and nutrition indicators collected in the National Health Survey (NHS): family planning, reproductive health, child health, and HIV/AIDS.

A limited number of figures will be provided at the Dzongkhag level (population per sex, age class, urban/rural). This survey should be jointly conducted by the NSB and the MoH. The DHS survey sponsored by the United States Agency for International Development (USAID) and undertaken by Macro International, Inc. can be used as a reference model.

The multi-sector survey will be conducted every 2 years. This nation-wide survey will provide:

- some basic indicators on households' socio-demographic conditions : household composition, water and sanitation, housing conditions, nature and ownership of assets, access to infrastructures;
- individuals' socio-economic conditions: age, sex, marital status, nationality, education, literacy level, qualification, employment (all the data on employment needed by the MoLHR), health status.

A specific module could be added to either data collection rounds according to priorities defined by the BSS partners: activities of informal production units, child labour, access, utilization and satisfaction with some basic social services, etc.

The NSB and some BSS partners (MoLHR, MoE, MoH) will jointly conduct this survey. This multi-sector survey will complement the information collected through the administrative data sources on health and education; it will give information of their overall reference population, which is not always covered by these information systems.

The program proposes to restrict the yearly LFS to the urban areas. In fact, most of the labour force evolutions are observed in the urban areas. The information related to the overall country (urban and rural) will be provided by the multi-sector survey every two years. Therefore, the LFS will be carried out in the urban areas once every two years. The same data on employment will be collected in the LFS and the multi-sector surveys.

A yearly business survey is also included in the program from 2012. Its objective is to cover progressively all the economic activity units, starting with the large and medium size units, then the small size units. It should provide per economic sector data on the turnover, the intermediate consumption, the investments, the products and the employment and wages. Particular attention

should be paid to cover the key economic sectors in Bhutan: energy, construction, tourism. This survey should deliver the data, which are currently produced from the establishment census carried out every two years by the MoLHR. A better use of the existing administrative sources (tax sources) should also be explored, especially to build a reliable sample frame for the business survey.

The NSB is preparing the compilation of a quarterly Production Price Index (PPI) for the manufacturing sectors. It will be regularly delivered from 2009.

The RMA is quarterly collecting data on the service sector for the Balance of Payment compilation purpose. These statistical data should be published.

The consistency of the statistical data from administrative sources and data through surveys and censuses should be analysed for consistency. Use of common concepts (establishment, enterprise, household) and common classifications (same geographic coding system) is a way to improve this consistency.

As mentioned before, the use of surveys to deliver data needed at dzongkhag level for development planning and programming purpose cannot be generalised. Some data delivered for the smallest dzongkhag may not be significant because observations in the sample is too small: according to the PHCB 2005, one dzongkhag has less than 1,000 households, five have less than 3,000 households and 11 have less than 4,000 households. On top of this issue, increasing the size of the sample has two main limits: i) the cost of the survey and consequently its sustainability, ii) the timeliness of the results delivery: the amount of data collected has a direct impact on the time needed to process the data.

The use of other methodologies like small areas estimations and poverty mapping should be developed to answer to these data needs.

3. Strengthening the National accounts

The implementation of the SNA 93 should be completed in order to offer a full set of accounts including the sector accounts. The availability of more basic data is expected to strengthen the reliability and coherence of the GDP estimations.

4. Streamlining the dataflow among the data producers

There is a need to develop the data exchanges among the data producers for various reasons:

- To increase the efficiency of the data collection, which is a costly operation: data exchanges will limit redundant data collections as well as the response burden.
- To increase data coherency: one of the ways is to use common concepts and definitions.

So streamlining dataflow among data producers is an important coordination issue inside the BSS.

The Statistics Act will define the legal framework to organise the exchange of microdata within the BSS; these data will come either from surveys or censuses or from administrative data sources. The exchange of data should also go with the exchange of the corresponding metadata.

The partners will define data exchange formats in order to make the exchange process easier.

5. Management of the data quality

The BSS should guarantee to the users that the Official Statistics meet the quality standards suitable for their own purpose (policy analysis, forecasts, etc.).

Quality is defined in the ISO 8402 - 1986 as: “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs”. It is now recognized that the quality of statistics has several dimensions. The IMF has identified five dimensions: i) integrity, ii) conceptual consistency, iii) accuracy, iv) serviceability, and v) accessibility. Three features are used to manage the quality of statistical data: the governance of statistical system, the statistical processes and the statistical products. Combining the dimension and these features, the IMF has defined Data Quality Assessment Frameworks (DQAF). These frameworks provide a structure for assessing existing practices against best practices, including internationally accepted methodologies.

The management of quality should become a part of the professional culture among the BSS staff. This will be done through training and data quality assessment exercises covering the main official statistics fields. The NSB will have a leading role to support the BSS quality management.

The data quality assessment should be carried out using the Data Quality Assessment Frameworks (DQAF) developed by the IMF. It should also include in-depth analysis of the data under review; the objective of the analysis will be to assess the reliability, the consistency and the coherence of the data⁷. The data quality assessments will enable to develop relevant plans for improvement.

The information of the users about the quality of Official Statistics is a component of the data quality management. It is usually done in two ways:

- The development and dissemination of the metadata: they provide detailed information on definitions, classifications, sources of data, compilation methods, and use of international guidelines.
- The preparation and dissemination of the results of the data quality assessments through quality reports.

The quality management will be developed progressively in order to cover all main statistics fields.

⁷ An example of such analysis is the “mirror exercise” made between the external trade data of two countries related to their bilateral trade

5.5 Strategic objective 5: Offer the users an easier access to the data

5.5.1 Definition

The objective of the BSS statistical data dissemination is to offer the users an easier access to the data, whatever the producer.

5.5.2 Rationale

The users and some producers have underlined that they did not have an easy access to the available data. They are expecting the NSB play a more important role in disseminating the data as a focal point.

5.5.3 Strategies

1. Development and implementation of a BSS coordinated dissemination policy

The users do not understand that Official Statistics are offered through different ways and conditions by various producers. To fulfil these expectations, the BSS needs to develop a common dissemination policy, which will be used as a reference framework for the dissemination of the Official Statistics. It will inform the users and state about the main rules and practices applied by all the BSS partners: products and dissemination tools, principles for the selection of the dissemination supports (paper, electronic, internet), pricing, and confidentiality rules. However, the BSS partners will be in charge of the preparation and dissemination of sector statistics publications.

2. The amount and timeliness of the Official Statistics available to the users is increased

Many data are produced which are not available on a regular basis to the users. The BSS will develop dissemination products to enlarge the scope of the data disseminated while limiting the cost of the dissemination.

All the BSS partners will make great efforts to improve the timeliness of their publications.

3. The NSB is a focal point for the data dissemination to the users

The NSB is the BSS entry point for users. Beside the dissemination of data done by every producer, NSB will be in charge of dissemination of all official statistics upon request of users.

The NSB will act as the central repository of all the BSS publications and public databases. It will offer to users in its library all the BSS paper and soft publications.

The NSB web site will also act as the web entry point for the Official Statistics in Bhutan. Hyperlinks should be offered towards the BSS partners' data products.

6 Action Plan for 2009-2013

The action plan is an operational plan that implements in an integrated and coherent way the selected strategies during the 2009-2013 five-year period. It fits in the NSB/01 program of the 10th FYP (“Strengthening of National Statistical System”).

The action plan consists of three components:

- The BSS capacity-building component to strengthen the Official Statistics legal framework, the BSS governance and the management of the BSS resources.
- The BSS statistical production component.
- The BSS statistical dissemination component.

The following table describes the impacts, outcomes, outputs and projects/activities of the program according to the template used to describe the 10th FYP programs.

Impact	Outcomes	Outputs	Projects/Activities
Decisions are made based on timely, realistic and reliable data and information	A legal and policy framework for the efficient production and dissemination of Official Statistics by the BSS is available. Statistical data fulfilling the user needs are regularly produced by the BSS and easily available to the users.	The legal framework and governance of the BSS is strengthened. The BSS human resources skills are developed and the management of the human technical and financial resources is pooled. The BSS develops the use of administrative sources and implements a program of coordinated surveys and censuses. The quality of official statistics is improved. The users have an easier access to the Official statistics.	Strengthening the BSS legal framework and governance. Creating the National Statistical Service. Development of the compilation of administrative sources. Demography and health survey. Multi-sector survey. BLSS. Business statistics development. Strengthening the National accounts. Statistics quality development. Statistics dissemination development.

A complete definition of each component has been designed according to the logframe model (see annex 4). This model lists:

- the component specific objective
- the results to be achieved,
- the activities that should be carried out for each result,
- the indicators used to check the result achievements,
- the assumptions that identify the external events that may affect the implementation of the component.

Each component includes several projects, which will be detailed in a further step.

6.1 Component 1: Strengthening the Official statistics legal framework and governance, and the management of the BSS resources

This capacity-building component will ensure that the BSS has a legal framework enabling the development of the Official Statistics in Bhutan. It will organise, in a coordinated way, pooling of human and technical resources among the BSS partners, based on the BSS annual work program activities and an increasing efficient use of these limited resources.

6.1.1 *Strengthening the legal framework and governance for the Official Statistics*

Output 1	The Statistics Act is adopted and implemented		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
1.1 Finalisation of the Statistics Act and discussion between the BSS partners	1	End 2009	All partners
1.2 Promotion of the Statistics Act to the users and the data providers	1	2009 - 2010 then continuous	All partners
1.3 Review of the data processing and dissemination processes to assess the data confidentiality management	1	2010 then continuous	All partners

The Statistics Act, which has been drafted, has to be finalised to take account of the Constitution, and the past and current BSS experiences. Some key issues need to be clarified: mission of the NSTC, organisation of the dialogue with the users, mandate of the BSS as regards the Official Statistics, exchange of information between the Official Statistics producers and administrative data providers for statistical purpose. The explicit definition of the list of the Official Statistics (named designated statistics in the draft Act) may be too restricting, as they must be regularly adapted to the users' changing demands.

Discussion and agreement of the BSS partners on the proposed Act are necessary to guarantee its smooth implementation. The last steps of the process are the discussions and adoption of the Act by the Government and the National Assembly. These steps will be an opportunity to increase the statistics awareness of the political decision-makers. The adoption of the Act during the first year of the Action Plan is a fundamental element to ensure the implementation of all its activities during the following years.

The Act will imply obligations for the respondents and give them guarantees. The BSS has to explain and promote the Act to the data users and the respondents. Supporting communication materials should be prepared (leaflet, brochure, etc). The BSS partners will use them when contacting the users and respondents (surveys, workshops). A specific promotion of the Act through the media could also be organised.

The Statistics Act will also commit the Official Statistics producers. The BSS staff should be aware of the content of the Act. Training should introduce every new staff to the Act and guidance should be regularly given about its impact on the daily work when collecting, processing and disseminating statistical data (see also the following activities 7.1 to 7.3).

The confidentiality is an important issue for the respondents' trust in Official Statistics. It takes specific importance in small countries where many detailed data observations could be very few and may disclose some confidential information. The BSS partners should review all their statistical processes especially for data dissemination in order to check they respect the Act confidentiality clauses.

Output 2	The coordination is organised between the BSS partners in the framework of the Statistics Act		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
2.1 Organisation of the NSTC work: regulation; work plan	1	2010	NSTC, NSB

By the end of 2010, the NSTC should be operational and have started its work. The Director of NSB will be the chairperson. At least one full time staff from the NSB Coordination and Information Division should support the Director of NSB and all the approved positions in this Division should be occupied.

Output 3	The BSS annual work program is coordinated		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
3.1 Preparation of the BSS annual work program and budget by the NSB and partners.	1, 4, 5	2009 for 2010 work program, then yearly	NSB and BSS partners
3.2 Adoption of the annual work program and budget by the NSTC	1, 4, 5	2010, then yearly	NSTC, NSB
3.3 Publication of the BSS annual list of surveys and censuses and of the calendar of the BSS publications issues	1, 4, 5	2010, then yearly	NSTC, NSB
3.4 Preparation of the annual work program implementation reports and the BSS synthesis report	1, 4, 5	2011 for 2010 work program, then yearly	NSTC, NSB and BSS partners

Coordination is an important issue in a decentralised statistical system. The Statistics Act will provide the general framework for the BSS coordination. However, the coordination of the statistical activities is a continuous process, which will deepen but never end. That is why it is necessary to become rooted on concrete results.

During this Action Plan period, the preparation of the BSS annual work programs and corresponding budgets will be one of the privileged ways to develop the cooperation between the BSS partners. It will ensure that there is no redundant data collection, limiting the respondents' burden and increasing the BSS efficiency. The NSTC will endorse the BSS annual work program. The annual list of surveys and censuses published by the NSTC will inform the users about the data collection operations carried out in the framework of the Official Statistics. At the same time, a calendar of the BSS publications will announce the dates of release of main statistical data.

The NSB and the BSS partners will report yearly about the implementation of the BSS annual work program. The NSTC will review every BSS annual work program report to assess the implementation of the work program and identify how to improve the coordination during the preparatory and implementation phases.

Output 4	The NSDS implementation is reviewed every 5 years and the NSDS is updated		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
4.1 Assessment report on the 5-year NSDS implementation	1, 2, 3, 4, 5	2013	NSB and BSS partners
4.2 Assessment report on the user needs and satisfaction	1, 2, 3, 4, 5	2013	NSB and BSS partners
4.3 Review of the report by the NSTC and update of the NSDS	1, 2, 3, 4, 5	2013	NSTC

The NSDS should be updated every 5 years in order to take account of the results of 5-year Action Plan and of the change of users' demand. During the final year of implementation of the Action Plan, an assessment report on the 5-year NSDS implementation will be prepared by the NSB with the support of its BSS partners. Beside the permanent dialogue, which should take place between the BSS partners and the users, an assessment of the users' needs and satisfaction should also be carried out every five years.

The NSDS will be updated based on the findings of the NSDS assessment and the user needs and satisfaction. The updated NSDS will be endorsed by the NSTC and a new Action Plan will be designed for the next following five years.

6.1.2 *Building the National Statistical Service and strengthening the human resource skills*

Output 5	An overall human resource policy framework – the “National Statistical Service” - is agreed between the BSS and the RCSC, and implemented		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
5.1 Definition of a new career structure for the BSS technical staff	2	2009 - 2010	NSB and BSS partners, RCSC
5.2 Definition of the NSB and NSTC roles for the management of the BSS technical staff	2	2009 - 2010	NSTC, NSB
5.3 Description of all the positions of the BSS technical staff (occupied and vacant)	2	2010	NSB and BSS partners
5.4 Organisation of the technical staff mobility (including out posting)	2	Starting in 2011, then yearly	NSTC, NSB

The NSB will manage the technical human resources for the overall BSS in the framework of the “National Statistical Service”: all the NSS staff will be under its responsibility and report to the Director of NSB. The assignment of the NSS staff will be done according to the BSS annual work programme priorities and needed skills. This enables the sector statistics units to face an increased workload or a need for subject-matter specialists due to the organisation of specific operations planned in their annual work program. It will also ensure broader career opportunities for the BSS staff.

The organisation of the NSS management should be agreed between the BSS and the RCSC. It should cover the recruitments, appointments, career development and training of the BSS technical staff.

Output 6	The use of human resources for statistical purpose in the Dzongkhag is rationalized		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
6.1 Definition of an organisational model for the use of technical staff for statistical activities at the Dzongkhag level	2	2010 - 2011	NSB and BSS partners
6.2 Agreement of the BSS partners on the rationalised use of statistical staff at the Dzongkhag level	2	2010 - 2011	NSTC, NSB

Although the DSOs have a clear mandate for collecting data for the NSB at the Dzongkhag level, it may sometimes overlap with data collection carried out by Dzongkhag Sector Officers or the DSOs may not have access to certain data. The DSOs have also the suitable skills at the Dzongkhag level to provide some support to these officers for statistical data collection and processing.

In order to make an efficient use of the DSOs skills, several issues will be discussed between the BSS partners and the Dzongkhags: the general organisation of the data collection at that level, the statistical data dissemination, the specific role of the DSOs and the allocation of financial resources to support his work.

Output 7	The BSS staff is trained according to a training program		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
7.1 Assessment of the BSS staff statistical training needs	2	2009	NSB and BSS partners
7.2 Development of the BSS statistical training program	2	2009	NSTC, NSB
7.3 Organisation of the statistical training sessions	1,2,4,5	2010 - 2013	NSB and BSS partners
7.4 Assessment of the statistical training program	2	2013	NSTC, NSB

Training activities will represent an important part of the activities of this capacity-building component. These activities will aim at strengthening the technical capacity of the BSS staff to manage statistical operations and teams, to produce, analyse and disseminate the data, and at increasing the professionalism of the staff. The training activities will particularly cover the impact of the Statistics Act on the daily work and attitude of the staff, and some other training needs already identified: sample survey design and management, data analysis, conception of publication. Some fellowships will support the most experienced and qualified staff to get higher qualifications (masters and PhD) in order to provide the BSS with high level managers able to conduct the future developments of the BSS activities.

The definition of a 4-year training program will rely on the assessment of the training needs for every staff qualification in the BSS and the skills needed to implement the BSS activities. The training resources will also be identified during this assessment phase.

Statistical training activities planned for the years 2010-2013 will be described in the training program: objectives of the activity, number of staff trained, length and period, prerequisite knowledge.

The training program will be implemented on a yearly basis by the NSB under the supervision of the NSTC. An assessment of the training program will be carried out at the end of the program.

6.1.3 Pooling the financial and technical resources and investments

Output 8	A BSS-wide financing strategy is defined and implemented for Official Statistics		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
8.1 Definition of a set of common financial rules for the BSS	3	2010	NSB and BSS partners
8.2 Implementation of the BSS common financial rules	3	Starting from 2011	NSTC, NSB and BSS partners

The BSS Annual work program budget will summarize the cost of each statistical activity and the contribution of every statistical partner to this cost. A set of BSS common financial rules will be defined to ensure that this presentation will be consistent and coherent.

This set of rules will be based on the public administration financial rules. But it will represent a further harmonization inside the BSS. They may cover for example: the surveyors' rates, the consultants' rates. These rules will also be useful to define the financial conditions of the exchange of services among the BSS partners. They will also enable the BSS to present a unified financial approach to prepare the budget of projects funded by the development partners.

Output 9	The BSS partners are sharing costly technical resources in order to make an efficient use of these technical resources and of the staff in charge of their management		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
9.1 Definition of a service level agreement framework for the provision of GIS services by the NSB	3	2010	NSB and BSS partners
9.2 Provision of GIS services by the NSB to the BSS partners (survey management and data presentation)	3	Starting from 2011	NSB and BSS partners

GIS resources are one of the most costly resources, which can be shared among the BSS partners. The NSB has got a broad experience of the use of GIS during the PHCB 2005. It can offer them to its partners. But the provision of these GIS services has to be organised in order to ensure that the GIS resources and the client inputs are available on time to deliver the results. The relation between the NSB (the service provider) and the client (the statistics unit) will be stated in a service level agreement.

Such exchanges of technical resources could also be developed in other fields: data entry (workstations and staff), statistical data management, etc.

Output 10	The BSS partners refer to a common list of technical standards (hardware, software)		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
10.1 Definition of a list of standard software and hardware enabling easy exchange of data and implementation of common training for all the BSS staff	3	2010	NSB and BSS partners
10.2 The BSS partners refer to the list of standard software and hardware when purchasing some ones	3	Starting from 2011	NSB and BSS partners

Increasing their cooperation and the exchange of data, the BSS partner will set up a common list of technical standards to make easier all these exchanges and strengthen the common technical culture among the BSS staff. At the top of this list should appear the statistical software used for the statistical data processing and analysis.

6.1.4 *Budget and timetable*

Budget in US\$

Inputs	2009-2013		
	Project	Government funding	
		Recurrent costs (1)	Capital
International consultants	222,900		
National consultants	103,025		
BSS Staff		35,700	
Training/Workshops/study tours	558,150	5,460	
Fellowships	388,000		
Printings/publications	500		
Equipments	12,000		
Total	1,284,575	41,160	

(1) Official staff

Projects/Activities	Project						Government funding
	2009-2013	2009	2010	2011	2012	2013	
Strengthening the legal framework and governance for the Official Statistics	162,600	35,750	79,000	26,750	0	21,100	21,000
Building the National Statistical Service and strengthening the human resource skills	1,098,175	38,150	265,138	262,938	253,888	278,063	15,960
Pooling the financial and technical resources and investments	23,800	0	11,800	4,000	4,000	4,000	4,200
Total	1,284,575	73,900	355,938	293,688	257,888	303,163	41,160

Timetable

	2009	2010	2011	2012	2013
1.1 Finalisation of the Statistics Act and discussion between the BSS partners.					
1.2 Promotion of the Statistics Act to the users and the data providers.					
1.3 Review of the data processing and dissemination processes to assess the data confidentiality management					
2.1 Organisation of the NSTC work: regulation; work plan.					
3.1 Preparation of the BSS annual work program by the NSB and partners.					
3.2 Adoption of the annual work program by the NSTC					
3.3 Publication of the BSS annual list of surveys and censuses and of the calendar of the BSS publications issues.					
3.4 Preparation of the annual work program implementation reports and BSS synthesis report.					
4.1 Assessment report on the 5-year NSDS implementation					
4.2 Assessment report on the user needs and satisfaction					
4.3 Review of the reports by the NSTC and update of the NSDS					
5.1 Definition of a new career structure for the BSS technical staff					
5.2 Definition of the NSB and NSTC roles for the management of the BSS technical staff.					
5.3 Description of all the positions of the BSS technical staff (occupied and vacant).					
5.4 Organisation of the technical staff mobility (including outposting).					
6.1 Definition of an organisational model for the use of technical staff for statistical activities at the Dzongkhag level.					
6.2 Agreement of the BSS partners on the rationalised used of the statistical staff at the Dzongkhag level.					
7.1 Assessment of the BSS staff statistical training needs					
7.2 Development of the BSS statistical training program					
7.3 Organisation of the statistical training sessions					
7.4 Assessment of the statistical training program					
8.1 Definition of a set of common financial rules for the BSS (ex: surveyors rate, consultants rates, cf. also the publication pricing policy, exchange of services between the BSS partners).					
8.2 Implementation of the BSS common financial rules.					
9.1 Definition of a service level agreement framework for the provision of GIS services by the NSB					
9.2 Provision of GIS services by the NSB to the BSS partners (survey management and data presentation).					
10.1 Definition of a list of standard software and hardware enabling easy exchange of data and implementation of common training for all the BSS staff.					
10.2 The BSS partners refer to the list of standard software and hardware when purchasing some ones.					

6.2 Component 2: the BSS statistical production

The BSS statistical production program defines the statistical products that the BSS plans to deliver during the 2009-2013 period and the statistical operations, which will be implemented to deliver these products. It also presents how the BSS intends to do to increase the quality of the Official Statistics.

6.2.1 *A more efficient use of surveys, censuses and administrative sources*

The use of administrative sources

Output 1	The use of administrative data sources is developed		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
1.1 Development of the use of administrative sources for the production of data in the following fields:	4		NSB and BSS partners
a) Education,		Yearly	MoE
b) Health,		Yearly	MoH
c) Vital statistics		Yearly	MoHCA
d) Tourism		Monthly, quarterly, yearly	MoEA
e) Transport		Yearly	MoIC
f) Energy		Quarterly, Yearly	MoEA
g) Business		Quarterly, yearly	NSB, MoEA, MoF
h) External trade		Quarterly, yearly	MoF - DRC
i) Budget and finance		Quarterly, yearly	MoF
j) Monetary statistics		Monthly, quarterly, yearly	RMA

Several statistical units in sector Ministries are already implementing projects whose objectives are to improve their administrative records and as a consequence the production of statistical data using these records. The data fields covered are mainly: education, health, vital statistics (using civil registration data), tourism, and monetary statistics. Several specific improvements of the data recording are needed for statistical purpose:

- Specific information needed to compile the statistical data should be recorded by the administrative data sources, especially those related to the geographic areas (Dzongkhag and Gewog). For example, the BHMIS should record the home Dzongkhag and Gewog of the health care centre users.
- The data collection procedures will enable the timely production of the statistical data.

The development of the use of administrative records to produce business statistics is one of the priorities of the Action plan (see the following output 3).

Since a long time custom data are used to produce external trade statistics. These statistics have many users and they are used for the compilation of many economic indicators, mainly in the National Account and the Balance of Payments. Their improvement has been identified as an important output during this Action Plan. It will focus on developing the statistical processing of the source data records in order to upgrade the quality of the statistics and the timeliness of their delivery. This can be

done using existing software dedicated to the production external trade statistics data⁸ or through the development of an adhoc IT solution. Quarterly data dissemination is also planned during the period.

Although many statistical data are produced using the administrative data sources, their dissemination is often restricted to a limited number of users. The dissemination program will set up solutions to develop their dissemination.

The surveys and censuses

Output 2	A well coordinated program of surveys and censuses is implemented		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
2.1 Implementation of the following surveys according to the multiannual program, during the next five years:	4	2011	NSB
a) BLSS		2009, 2013	NSB, MoH
b) Demographic and health survey		2010, 2012	NSB and BSS partners
c) Multi sector survey		2009 (every 10 years)	MoA
d) RNR census		Yearly	DoL-MoA
e) Livestock census			
2.2 Implementation of the yearly program of following surveys :	4	2009, 2011, 2013 ⁹	MoLHR
a) Labour force survey (urban areas)		Yearly	DoA-MoA
b) Agriculture (crop) survey		From 2012, yearly	NSB, MoLHR, MoEA
c) Business survey			
2.3 Implementation of the quarterly program of following surveys :	4	Quarterly	NSB
a) Consumer price survey			NSB
b) Production price survey			RMA
c) Service sector survey			
2.4 Preparation of the next Population and Housing census	4	2013	NSB

The above activities implement the 10-year program of surveys and censuses during the Action plan period.

The BLSS is the central pillar for the poverty monitoring. The Living Standards Measurement Study (LSMS) family survey carried out every 4 years is planned in 2011.

A new demographic and health survey is planned in 2009 and in 2013. The NSB and the MoH could jointly design the survey. Experiences of the neighbouring countries in conducting such survey should also be studied: Bangladesh in 2007, India in 2005/2006, Nepal in 2006, and Pakistan in 2006/2007.

A new multi sector survey is proposed for 2010 and 2012. It will be a major operation for all the BSS. The preparation of this survey should join in close cooperation the NSB, the MoLHR, the MoE and

⁸ For example PC/Trade sponsored by Statistics New Zealand or Eurotrace sponsored by Eurostat (the European Commission Statistics Directorate)

⁹ For the other years, the LFS will be part of the Multi sector survey.

the MoH. The first step will start in 2009 with the preparation of the sampling and the questionnaire in order to ensure a full coherency with the LFS carried out in the urban areas in 2009, 2011 and 2013. The experience of the implementation of multi-purpose surveys like MICS and CWIQ will be studied. A specific module could be added in 2012 if relevant.

The next RNR Census is planned in 2009. Nevertheless, the funding is not currently fully secured. It should be carried out at the latest in 2010, as there is a lack of reliable and up-to-date agriculture statistics.

The yearly agriculture survey is used to estimate main crops production. The methodology currently used in this agriculture survey will be updated in order to improve the reliability and the timeliness of the data.

A yearly business survey will be conducted from 2012. The preparation of this survey will be one of the outputs of the study described under the following output 3.

The consumer price survey is quarterly carried out by the NSB in order to produce the CPI. In order to improve the quality of the CPI, the weight system should be updated regularly after the BLSS surveys.

A new survey will be carried out quarterly from 2009 to collect the production price in the main manufacturing industries. The data collected will be used to compile the production price index of the manufacturing sector.

The next Bhutan Population and Housing Census (BPHC) is planned in 2015. The preparatory work will start in 2013.

The specific issue of business statistics

Output 3 The business statistics are strengthened.			
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
3.1 Feasibility study to improve the business statistics.	4	2009	NSB and BSS partners
3.2 Development of a business sample frame (business register).	4	2010 - 2011	NSB
3.3 Improvement of the business statistics on large size business using administrative sources	4	From 2010	NSB and BSS partners
3.4 Improvement of the business statistics on small and medium size business using a business survey	4	From 2012	NSB

Although the manufacturing, services and trade sectors are contributing to an increasing part of the GDP, business statistics have been identified as one of the weakest areas of the Official Statistics. For example, the important construction sector is poorly described as well for its contribution to employment as for its share in GDP.

The economic activity of the major companies is quite well valued. However, the on-going liberalisation of the economy is expected to give a bigger role to the medium and small size enterprises. The administrative records based on the trade, manufacturing and service licenses, are currently used to get some information on these actors or as sample frame. Nevertheless, they are becoming less and less relevant: the yearly licensing has been replaced by a 3-year registration for most of the units; and the registration will be probably suppressed during the next five years except for the incorporated companies. New administrative records like the tax records have to be explored

as future source of information. The implementation of a business survey to collect information from the small and medium size enterprises needs the establishment of a business register as sample frame. The household multi sector survey can also provide information on the economic activity of the smallest enterprises (un-incorporated business or informal sector) which have quite no records.

All these changes justify the need for a study to explore how to improve the business statistics. The study should identify the data sources useful to build a business register, which kind of administrative data could be used to get information on the large size enterprises, and which results can be expected from a yearly business survey addressing the medium and small size ones and from a specific module of the multi-sector survey for the smallest units .

Harmonisation of concepts and classifications used by the BSS

Output 4	Concepts and classifications used by the BSS partners are harmonised.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
4.1 Harmonisation of concepts and classifications used by the BSS partners	1, 4, 5	2009 to 2013	NSB

When providing support to the BSS partners during the preparation of their surveys, the NSB should take care that the concepts and classifications used are consistent across all the surveys. The Executive Order of the Prime Minister dated May 2006 has strengthened the NSB capacity to ensure this harmonisation.

However, this harmonisation is less developed between the survey data and the administrative sources data. A key issue is the use of a common geographic coding system based on the current boundaries of the geographic areas (Dzongkhag and Gewogs): for example, the MoA and the DRC are using their own geographic codes.

6.2.2 The National Accounts are strengthened

Output 5	The National accounts are strengthened.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
5.1 Complete the implementation of SNA 93.	4	2009 to 2013	NSB

The improvement of the National Accounts is one of the priorities of the NSB during the Action Plan. Technical assistance is needed to complete the implementation of the SNA93. A “supply and use table” should be built and a full set of the sector accounts prepared. The estimation of the production will be improved in priority for the key economic sectors: energy, construction, agriculture. The yearly publication will further explain the methodology used to compile the National Accounts.

The availability of new and timely data will enable to enhance the quality of the aggregates (final results and estimations).

Government Financial statistics are available on a fiscal year basis when the National Accounts are aligned on the calendar year. The coordination with the MoF will be developed in order to get preliminary fiscal data enabling to produce a first set of timely aggregates that fulfil the national and international requirements. When the SNA93 will be fully implemented, the NSB will produce either half-year estimates of the main aggregates or these aggregates values for the fiscal year, in order to answer to the request of MoF and RMA.

6.2.3 *Streamlining the dataflow between the data producers*

Output 6	The dataflow is streamlined between the data producers.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
6.1 Creation of a newsletter to develop the communication between the data producers about the availability of new data	1, 4	2009	NSB and BSS partners
6.2 Definition of data exchange formats	1, 4	2009 to 2013	NSB and BSS partners
6.3 Exchange of data and metadata among the producers	1, 4	2009 to 2013	NSB and BSS partners

The data producers need to compare their own data with the data delivered by other producers. It is one of the ways to assess the quality of the data and to ensure their consistency. The implementation of surveys fulfilling the data needs of several producers will also increase the need for exchanging data among the BSS producers.

Several activities will be carried out to streamline the dataflow between the BSS data producers. The first step is to develop the communication between the data producers to inform about the availability of new data, for example through a BSS internal newsletter. For regular exchange of data, standard data exchange formats will be defined.

The exchange of data among the producers will only be fully efficient if the exchange of data includes also the exchange of metadata. The increasing interdependence of the BSS producers will also require that common concepts and methodologies should be used. The definition and use of these common concepts and methodologies will also increase the consistency of the data.

6.2.4 *Developing the analysis of the available data*

Output 7	The BSS produce thematic reports and value-added statistics product.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
7.1 Production of thematic reports	1, 2, 4	2009 to 2013	NSB and BSS partners
7.2 Production of value-added statistics products relying on GIS	4	2009 to 2013	NSB and BSS partners

Most of the BSS publications available are describing the data produced by a statistical operation: survey, census, or administrative source. The decision-makers expect further analysis on a thematic basis. The Poverty Analysis Reports 2004 and 2007 fulfil some of their expectations.

The BSS will develop the scope of thematic reports analysing data coming from various data sources and BSS partners. The training programme (cf. component 1, output 7) will support the development of the skills and expertise at the BSS for data analysis, especially policy-related analysis. The use of Geographic Information Systems (GIS) technique will support the analysis. The NSB and BSS partners will develop collaboration with the national institutions and subject matter specialists that have analytical capacity.

The NSB Socio-economic and Research Division needs to be completely staffed according to the scheme approved for the 9th FYP.

6.2.5 *Increasing the quality of the official statistics*

Output 8	The quality of Official Statistics is improved.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
8.1 Develop the quality culture among the BSS staff through training.	2, 4	2009	NSB and BSS partners
8.2 Data quality assessment of the main statistical fields and preparation of improvement plans.	4	2009-2013	NSB and BSS partners
8.3 Development of the metadata	1, 4	2009-2013	NSB and BSS partners
8.4 Dissemination of data quality reports for the main statistical fields	4	2009-2013	NSB and BSS partners

The quality of the official statistics will be managed by the BSS and coordinated by the NSB. It will be one of the tasks of the BSS annual work program. The progress of the quality of Official Statistics will be monitored by the NSTC.

The quality culture inside the BSS will be increased through staff training. This training will be one component of the BSS training program. It will cover the definition of the quality and the tools used to assess the data quality.

The assessment of the data quality will be carried out so that all the main statistical fields will be covered during a 5-year period. The assessment of the data quality in each field will be done under the responsibility of the corresponding sector unit, and the NSB will provide support to the sector unit. The results of the quality assessment will be presented in a quality report, which will be available to the users. These results will also be used to define a quality improvement plan for the statistical field.

Metadata are indispensable to carry out the data quality assessments. They define the concepts, the classifications, the methodologies and the procedures used to compile the data. They will be developed and disseminated to all the data users.

6.2.6 *Synthesis: the statistical data delivered*

The BSS annual work program will give a picture of all the data productions and publications and will be an effective coordination tool to rationalize the data production.

The following tables give the list of the statistical data products per statistical domain delivered by the BSS including the new products whose production will be developed during the Action Plan.

Demographic and social statistics

Products	Main content	Data source	Frequency	Timeliness objective	Responsible / BSS partners involved
Population statistics	Size and composition, births, deaths, migration, growth rate (all geographic levels) Population projections	PHCB	10-year	12 months	NSB
	Socio-demographic characteristics Size and composition, births, deaths, migration, growth rate (dzongkhag level)	Demographic and health survey	5-year	9 months	NSB, MoH
	Socio-demographic characteristics Size and composition (dzongkhag level)	Multi-sector survey	2-years	6 months	NSB, MoE, MoH, MoLHR
Health statistics	Population health status, mortality, morbidity, incidence of disease Healthcare system characteristics and access	BHMIS	yearly	6 months	MoH
	Socio-demographic characteristics Population health status, mortality, morbidity, incidence of disease. Health care system access. Access to water and sanitation. Nutrition	Demographic and health survey	5-year	6 months	NSB, MoH
Education statistics	Pupils (per age, sex, class, other individual information), enrolment and completion by level. Examination results. Teachers, school facilities	EMIS	yearly	6 months	MoE
	Socio-demographic characteristics Enrolment and completion rates by level. Literacy	Multi-sector survey	2-years	6 months	NSB, MoE, MoH, MoLHR
Labour statistics	Urban population only Socio-demographic characteristics, nature of work, employment status. Nature of unemployment Economically active youths aged 15-24 characteristics and employment. Income Skills obtained as a result of VTI trainings	LFS	yearly	6 months	MoLHR
	Same as previous one for both urban and rural population	Multi-sector survey	2-year	6 months	NSB, MoE, MoH, MoLHR

Products	Main content	Data source	Frequency	Timeliness objective	Responsible / BSS partners involved
	Employment, wages/earning per activity sector	Business survey, RCSC data records	Yearly	3 months	NSB, MoEA, MoLHR, RCSC
	Socio-demographic characteristics, nature of work, employment status. Nature of unemployment	PHCB	10-year	12 months	NSB
Income and living conditions statistics	Socio-demographic characteristics (housing, employment, health status, fertility, education) Consumption expenditure, Assets ownership Access to public facilities Income poverty and other poverty measures	BLSS	4-year	9 months	NSB
	Socio-demographic characteristics (housing, employment, health status, fertility, education)	Multi-sector survey	2-years	6 months	NSB, MoE, MoH, MoLHR
	Socio-demographic characteristics (employment, health status, fertility, education) Housing conditions and equipments.	PHCB	10-year	12 months	NSB

Macro-economic statistics

Products	Main content	Data source	Frequency	Timeliness objective	Responsible / BSS partners involved
National Accounts	National accounts aggregates and balancing items in nominal and real terms: Gross Domestic Product, Gross National Income, Gross Disposable Income, Consumption, Saving, Capital Formation, and Net Lending/Net Borrowing. Supply and use table, sector accounts	Surveys, census, administrative data sources	Yearly	6 months (first estimates) 14 months (full set)	NSB
Consumer price Index	Consumer price index for nation-wide urban areas	Consumer price survey	Quarterly	2 months after the end of the quarter	NSB
Producer price index	Producer price index for the manufacturing industries	Producer price survey	Quarterly	2 months after the end of the quarter	NSB
Monetary statistics	Broad money and credit aggregates Central bank aggregates Interest rates International reserves	Banks monthly report to RMA	Monthly	3 months	RMA
Balance of Payments	Main aggregates and balances of the balance of payments, including, imports and exports of goods and services, trade balance, income and current transfers, current account balance, reserves and other financial transactions, and overall balance, with detailed components	Surveys and administrative sources	Yearly	9 months	RMA
Government finance statistics	Central government aggregates (Revenue, expenditure, balance, and financing per debt holder, instrument, currency)	Public finance administrative records	quarterly	3 months	MoF
	Central government debt (Domestic debt and foreign debt, per currency, maturity, debt holder, instrument)	Public finance administrative records	Yearly	3 months	MoF

Business statistics

Products	Main content	Data source	Frequency	Timeliness objective	Responsible / BSS partners involved
Industries, construction and services statistics	Production per product Financial figures (turnover, assets and investments, profit/loss) Employment per qualification, wage/earnings	Business survey and administrative records	Yearly	9 months	NSB, MoEA, MoLHR, RCSC
	Outcome of the economic transaction of Bhutan with the rest of the world	Survey on service activities	Quarterly	3 months	RMA
Energy statistics	Production, consumption and sales of electricity	Administrative records	Monthly	1 month	MoEA
Transport statistics	Infrastructure road statistics	Administrative records	Yearly	6 months	MoWHS
	Road transport statistics Air transport statistics	Administrative records	Yearly	6 months	MoIC
Tourism statistics	Characteristics tourists (date of arrival, length of stay, nationality, purpose of visit) Tourist facilities Revenue of tourism	Administrative records	Monthly and Quarterly	2 months	MoEA
Trade statistics	Exports and Imports per commodity and country	Administrative records	Yearly	6 months	MoF - DRC
	Exports and Imports per commodity and country (India, others)		Quarterly	3 months	

Agriculture and environment

Products	Main content	Data source	Frequency	Timeliness objective	Responsible / BSS partners involved
Renewable natural resources statistics	Agricultural land use characteristics, crop production, livestock population and production, agricultural inputs, forest resources and utilization, agricultural marketing and farming constraints	RNR census	10-years	1 year	MoA
	Agricultural land use characteristics, crop production, agricultural inputs, agricultural marketing	Agriculture surveys	Yearly	6 months	DoA-MoA
	Livestock population and production	Livestock census	Yearly	1 year	DoL-MoA

6.2.7 Budget and timetable

Budget in US\$

Inputs	Project	2009-2013 Government funding	
		Recurrent costs (1)	Capital
International consultants	498,050		
National consultants	90,750		
Training/Workshops/study tours	59,350		
Printings/publications	26,450		
Equipments	30,000		
Surveys, censuses	1,410,000	603,000	750,000
Total	2,114,600	603,000	750,000

(1) Official staff

Activities	Project						Government funding	
	2009-2013	2009	2010	2011	2012	2013	Recurrent costs (1)	Capital
Strengthening administrative data sources compilation	280,300	93,000	141,585	39,755	2,980	2,980	0	0
Programme of surveys and censuses	1,548,400	640,367	167,300	23,067	214,600	503,067	603,000	750,000
a. BLSS	17,300	0	0	17,300	0	0	30,000	250,000
b. Demographic and health survey	534,600	284,600	0	0	0	250,000	120,000	500,000
c. Multi sector survey	334,600	0	167,300	0	167,300	0	36,000	0
d. Agriculture census.	350,000	350,000	0	0	0	0	42,000	0
e. Labour force survey (urban areas)	17,300	5,767	0	5,767	0	5,767	150,000	0
f. Agriculture crop survey	0	0	0	0	0	0	75,000	0
g. Business survey	94,600	0	0	0	47,300	47,300	0	0
h. Consumer price survey	0	0	0	0	0	0	50,000	0
i. Production price survey	0	0	0	0	0	0	50,000	0
j. Service sector survey	0	0	0	0	0	0	50,000	0
k. Preparation of the next Population and Housing census	200,000	0	0	0	0	200,000	0	0
Streamlining the dataflow among the data producers	7,000	2,700	4,300	0	0	0	0	0
Complete the implementation of SNA 93	54,850	13,713	13,713	13,713	13,713	0	0	0
Developing the analysis of the available data	121,100	34,600	17,300	34,600	17,300	17,300	0	0
Improving the Official Statistics data quality	102,950	25,090	25,090	17,590	17,590	17,590	0	0
Total	2,114,600	809,469	369,288	128,724	266,183	540,937	603,000	750,000

(1) Official staff

Timetable

	2009	2010	2011	2012	2013
1.1 Implementation of the following surveys according to a multiannual program, during the next five years:					
a. BLSS					
b. Demographic and health survey					
c. Multi sector survey					
d. Agriculture census.					
1.2 Implementation of the yearly program of following surveys					
a) Labour force survey (urban areas)					
b) Agriculture crop survey					
c) Business survey					
1.3 Implementation of the quarterly program of following surveys :					
a) Consumer price survey					
b) Production price survey					
c) Service sector survey					
1.4 Preparation of the next Population and Housing census is started.					
2.1 Development of the use of administrative sources for an annual production of data in the following fields:					
a) Education					
b) Health					
c) Vital statistics					
d) Tourism					
e) Transport					
f) Energy					
g) Employment					
h) Business					
i) External trade					
j) Budget and finance					
3.1 Feasibility study to improve the business statistics					
3.2 Development of a business sample frame (business register)					
3.3 Improvement of the business statistics on large size business through the use of administrative sources					
3.4 Improvement of the business statistics on small and medium size business through a business survey					
4.1 Production of data according to the BSS annual work program by the BSS partners					
5.1 Complete the implementation of SNA 93					
6.1 Creation of a newsletter to develop the communication between the data producers about the availability of new data					
6.2 Definition of data exchange formats					
6.3 Exchange of data and metadata among the producers					
7.1 Develop the quality culture among the BSS staff through training	Field 1	Field 2	Field 3	Field 4	Field 5
7.2 Data quality assessment of the main statistical fields and preparation of improvement plans	Field 1	Field 2	Field 3	Field 4	Field 5
7.3 Development of the metadata	Field 1	Field 2	Field 3	Field 4	Field 5
7.4 Dissemination of data quality reports for the main statistical fields	Field 1	Field 2	Field 3	Field 4	Field 5

6.3 Component 3: the BSS statistical dissemination

The BSS statistical dissemination component defines the framework used by the BSS to disseminate the Official Statistics, and how it intends to offer the users an easier access to the increasing amount of available data.

6.3.1 *Building the BSS dissemination policy*

Output 1	The BSS partners have developed a common dissemination policy that they implement.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
Definition of a common dissemination policy	5	2009 -2010	NSB and BSS partners
Publication of a BSS newsletter	5	2011-2013	NSB and BSS partners
Production of the BSS yearly catalogue of publications (along with the work plan)	1, 5	2010-2013	NSB and BSS partners
Development of a common data warehouse	5	2011-2013	NSB and BSS partners
Development of a common metadata dictionary	1, 4, 5	2011-2013	NSB and BSS partners

The users need to know how they can access to the data. The organisation of the BSS as a decentralised system should not make this access more difficult. The BSS partners will define a common dissemination policy, which will present to the users how they can access to the Official Statistics. The BSS dissemination policy will also harmonize and coordinate inside the BSS the dissemination practices. It should cover the following aspects:

- Promotion of the BSS data and products: development of common tools (newsletter, news release, catalogue of publications, etc).
- Price policy.
- Microdata dissemination rules (implementation of the statistics confidentiality).
- Exchange of publications inside the BSS.
- Harmonisation of the use of the different dissemination supports: paper, electronic support, web. The use of ICT (especially internet) through facilitating and reducing the costs of delivery of statistical information will be defined.
- Place and scope of the common dissemination tools: BSS publications (Yearbook, Quarterly economic indicators), BSS data warehouse and common metadata dictionary.
- Registration of the users and their centres of interest.
- User satisfaction assessment.

The users and producers are carrying out analyses that combine data coming from various data fields and sources. They need to have an easy access to a database, which will offer them a large scope of data coming from various statistical fields and time series. The BhutanInfo database is a first step towards a common statistical data warehouse gathering all the Official Statistics available for dissemination. Its coverage is being progressively extended to local level data in order to enable the MDGs indicators follow-up.

However, the development of a BSS common dissemination database offering the data on internet should be started. The existing solutions (Live Database, PC-Axis software family¹⁰, etc.) will be assessed as regards the BSS needs before the development of any specific solution.

¹⁰ Live Database, sponsored by the World Bank, is a tool that will assist the Statistical officers to centralize key relevant statistical indicators, which can be easily disseminated to enable improved policy analysis and formulation, monitoring and evaluation for evidence based making.

The PC-Axis family sponsored by Statistics Sweden and other statistical offices consists of a number of programs for the

A common metadata dictionary will support the development of metadata and their dissemination.

The NSB will be the leader for the development of the common data warehouse and common metadata dictionary.

6.3.2 *Enlarging the scope of data available to the users*

Output 2	The BSS partners have increased the amount and the timeliness of the data available to the users.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
Improvement of the timeliness of the dissemination of the existing publications: improvement plan per sector and implementation	5	2009 -2013	NSB and BSS partners
Extension of the quarterly dissemination to available data on: external trade, tourism, electricity	5	2010-2013	NSB and BSS partners

Several data are produced by the BSS partners. But they are often not available to the users or available with a great delay. A plan for the improvement of the timeliness of the NSB and sector statistical publications will be drawn up. It will be based on a review of all the existing publications. The objective will be to stick to the timeliness objective presented in paragraph 6.2.6. It will be implemented by the BSS partners as an activity of the BSS annual work plan.

Some statistical data are available on a monthly or quarterly basis. But they are disseminated to a very limited number of users or only upon request: external trade and tourism. The preparation of a publication to deliver a limited number of figures is often considered as a too heavy workload by their producers that does not justify a broader dissemination. The BSS will produce a quarterly publication (a BSS quarterly Bulletin) to disseminate these data. It may also include the data currently disseminated on a quarterly basis in small publications like the consumer price index. The objective of such a publication will be to disseminate the data at the latest by the end of the second month after the reference quarter. The exclusive use of an electronic format to disseminate the publication by internet or email will be considered.

The BSS staff in charge of the preparation of publications will be trained in order to increase the quality of the publications. The BSS training program will include this training.

Windows and Internet environment used to present statistical information. It is mostly used by the Statistical offices in different countries to let their users retrieve statistics. (see <http://www.pc-axis.scb.se/>)

6.3.3 *The NSB as focal point for the users*

Output 3	The NSB is a focal point for the data dissemination to the users.		
Activities	Contribution to strategic objective no.	Time frame	Responsible / BSS partners involved
Management by the NSB of the central repository of all the BSS publications and public databases	5	2010 -2013	NSB
Dissemination by the NSB of all the BSS publications to the users upon request	5	2010-2013	NSB
Adaptation of the NSB web site to a BSS entry point website	1, 5	2011-2013	NSB

All the users and the BSS producers are expecting the NSB plays a central role to disseminate the Official Statistics.

The NSB will ensure the preparation and the management of the common dissemination tools: BSS Newsletter, BSS Yearbook and BSS Quarterly Bulletin, common data warehouse, common metadata dictionary.

The NSB will ensure the archiving of all the statistical data. It will be the central repository of all the BSS publications. In a further step, this archiving mission could be extended to all the surveys and census data and metadata (questionnaires, data files, databases, etc.).

In order to offer an easier access to the data, the NSB will receive from all the BSS producers copies of their publications and will have the mission to disseminate these publications to all the users upon their request. This dissemination will be carried out according to the dissemination principles stated in the dissemination policy.

The Coordination and Information Division needs to be strengthened by one full-time statistical officer to be able to carry out the dissemination tasks.

The NSB will transform its website to a web portal for the Official Statistics. This portal will provide access to all the Official Statistics available in Bhutan (publications, public databases), either through a direct access to the data or through hyperlinks towards the selected data.

6.3.4 *Budget and timetable*

Budget in US\$

Inputs	Project	2009-2013	
		Government funding	
		Recurrent costs (1)	Capital
International consultants	113,450		
National consultants	80,000		
BSS Staff		18000	
Training/Workshops/study tours	226,650		
Printings/publications	72,000		
Equipments	31,500		
Total	523,600	18000	0

(1) Official staff

Projects/Activities	Project						Government funding
	2009-2013	2009	2010	2011	2012	2013	
BSS common dissemination policy	385,400	74,100	79,850	90,350	73,050	68,050	
Improving the dissemination	105,200	41,750	51,450	6,000	3,000	3,000	
NSB focal point for dissemination	33,000	0	33,000	0	0	0	18000
Total	523,600	115,850	164,300	96,350	76,050	71,050	18,000

Timetable

	2009	2010	2011	2012	2013
1.1 Definition of a common dissemination policy					
1.2 Publication of a BSS new sletter					
1.3 Production of the BSS yearly catalogue of publications.					
1.4 Development of a common data warehouse					
1.5 Development of a common metadata dictionary					
2.1 Improvement of the timeliness of the dissemination of the existing publications: improvement plan per sector and implementation.					
2.2 Extension of the quarterly dissemination to available data on: external trade, tourism, electricity					
3.1 Management by the NSB of the central repository of all the BSS publications and public data bases.					
3.2 Dissemination by the NSB of all the BSS publications to the users upon request.					
3.3 Adaptation of the NSB web site to BSS entry point website					

7 NSDS Implementation

7.1 Mechanisms for implementing

After endorsement of the NSDS by RGoB, the NSDS will be implemented under the supervision of the NSTC, as soon as this coordination body is operational.

The NSDS will be implemented through 5-year Action Plans, which will define the outputs and activities to be carried out during the Action Plan period. These Action Plans will also define the required budget framework for the period.

The Action Plan 2009-2013 will be integrated in the program NSB/01 “Strengthening of National Statistical System” of the 10h FYP. The funding of the Action Plan will be discussed between the RGoB, the BSS and the development partners. The Action Plan will be adjusted according to the final budget framework.

The 5-year Action Plan will be the reference framework for the BSS Annual work programs definition and implementation. Every year, the NSB will prepare the BSS Annual work program in coordination with the BSS partners. This program will be endorsed by the NSTC. Each BSS partner will implement the activities under its responsibility as stated in the BSS annual work program. The NSB will prepare the BSS annual work program report in coordination with the BSS partners and submit it to the NSTC. These annual reports will be disseminated to the BSS stakeholders. The NSTC may propose some revision of the Action Plan if needed.

7.2 Monitoring and evaluation

The NSDS and its Action Plans will be monitored by the NSTC.

A log frame is designed as support frame to the Action Plan. It defines the indicators used to monitor the results and the objectives of the Action plan. Corresponding indicators will be produced in the BSS Annual work programs. The BSS partners will report on these indicators.

The Action Plan will be assessed during the final year of its implementation (2013) either through a self-assessment conducted by the BSS partners and coordinated by the NSB, or through an external evaluation. Based on the results, the NSTC will update the NSDS. The NSB will prepare a new five-year Action Plan including a budget and a time schedule of the activities. The new action Plan will be submitted to the NSTC.

7.3 Risks

The adoption of the Statistics Act early at the beginning of the Action Plan will be the signal of a strong support from the Government and the National Assembly to the development of the BSS. On the contrary, any delay would be an obstacle to the development of the Official Statistics and the coordination between the BSS partners. It may postpone the full implementation of the NSDS’ first Action Plan.

The BSS human resources are limited. The departure of a significant number of staff, especially the most qualified, for long-term training or for other positions outside the BSS would compromise the NSDS implementation.

The full implementation of this Action Plan needs the support from the Government, all the Ministries/agencies involved in Official Statistics activities and the RCSC.

7.4 Sustainability

The involvement of the BSS partners through the Technical Working Group and the Consultation Workshop during the NSDS design process has supported its ownership. This process has promoted the development of partnerships and coordination between the BSS partners. It has also ensured that the NSDS is fulfilling the users' needs and the national priorities.

The NSDS design has been a step towards the development of the coordination, which is the central pillar for a sustainable development of the BSS.

NATIONAL STATISTICS DEVELOPMENT STRATEGY (NSDS)

Annexes



National Statistics Bureau
Royal Government of Bhutan

Annexes

ANNEX 1.	THE FUNDAMENTAL PRINCIPALS OF OFFICIAL STATISTICS.....	- 55 -
ANNEX 2.	DATA DIMENSION OF THE GDDS	- 57 -
ANNEX 3.	DESCRIPTION OF STANDARD INTERNATIONAL SURVEYS.....	- 62 -
ANNEX 4.	LOG FRAMES OF THE THREE ACTION PLAN COMPONENTS	- 67 -
ANNEX 5.	LIST OF PARTICIPANTS TO THE TECHNICAL WORKING GROUP AND THE NSDS CONSULTATIVE WORKSHOP	- 76 -
ANNEX 6.	THE ASSESSMENT OF BHUTAN STATISTICAL SYSTEM (BSS) REPORT.....	- 77 -

ANNEX 1. THE FUNDAMENTAL PRINCIPALS 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 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.

ANNEX 2. DATA DIMENSION OF THE GDDS

Table 3.1. Data Dimension of the GDDS

A. Comprehensive Frameworks—Macroeconomic and Financial Sectors

Core Framework		Encouraged Extension(s)	Periodicity	Timeliness
Framework	Coverage, classification, and analytical framework			
Real Sector				
National accounts	Producing and disseminating the full range of national accounts aggregates and balancing items in nominal and real terms, yielding Gross Domestic Product, Gross National Income, Gross Disposable Income, Consumption, Saving, Capital Formation, and Net Lending/ Net Borrowing. Producing and disseminating sectoral accounts and national and sectoral balance sheets, as relevant.		Annual	10–14 months
Fiscal sector				
Central government operations	Producing and disseminating comprehensive data on transactions and debt, emphasizing (i) coverage of all central government units; (ii) use of appropriate analytical framework; and (iii) development of a full range of detailed classifications (tax and nontax revenue, current and capital expenditure, domestic and foreign financing) with breakdowns (debt holder, instrument, currency), as relevant. ¹	General government or public sector operations data are encouraged where subnational levels of government or public enterprise operations are of analytical or policy importance	Annual	6–9 months
Financial sector				
Depository corporations survey	Producing and disseminating comprehensive data emphasizing (i) coverage of all depository corporations (banking and other deposit-taking institutions); (ii) use of an appropriate analytical framework; and (iii) development of classifications of external assets and liabilities, domestic credit by sector, and components of money (liquidity) and nonmonetary liabilities.		Monthly	2–3 months
External sector				
Balance of payments	Producing and disseminating comprehensive data on the main aggregates and balances of the balance of payments, including, for example, imports and exports of goods and services, trade balance, income and current transfers, current account balance, reserves and other financial transactions, and overall balance, with detailed components, as relevant.	International Investment Position (IIP)	Annual	6–9 months

Table 3.1 (continued)
B. Data Categories and Core Indicators—Macroeconomic and Financial Sectors

Data Categories	Core Indicators	Encouraged Extension(s)	Periodicity	Timeliness
Real sector				
National accounts aggregates	GDP (nominal and real)	Gross national income, capital formation, saving	Annual (quarterly encouraged)	6–9 months
Production index/indices	Manufacturing or industrial indices Primary commodity, agricultural, or other indices, as relevant		Monthly As relevant	6–12 weeks for all indices
Price indices	Consumer price index	Producer price index	Monthly	1–2 months
Labor market indicators	Employment, unemployment, wages/earnings, as relevant	Disaggregation by age, gender, employment status, occupation, and industry as appropriate	Annual ²	6–9 months
Fiscal sector				
Central government aggregates	Revenue, expenditure, balance, and financing with breakdowns (debt holder, instrument, currency), as relevant ³	Interest payments	Quarterly	1 quarter
Central government debt	Domestic debt and foreign debt, as relevant, with appropriate breakdowns (currency, maturity, debt holder, instrument), as relevant	Government-guaranteed debt	Annual (quarterly encouraged)	1–2 quarters
Financial sector				
Broad money and credit aggregates	Net external position, domestic credit, broad or narrow money		Monthly	1–3 months
Central bank aggregates	Monetary base		Monthly	1–2 months
Interest rates	Short- and long-term government security rates, policy variable rate	Money market or interbank rates and a range of deposit and lending rates	Monthly ⁴	
Stock market		Share price index, as relevant	Monthly ⁴	

¹For countries following the recommendations of the IMF's *Government Statistics Manual 2001 (GFSM 2001)*, classifications should refer to revenue, expense, net acquisition of nonfinancial assets, net acquisition of financial assets, and net incurrence of liabilities.

²Periodicity and timeliness for labor market indicators are recommended after consultation with the Bureau of Statistics of the International Labor Organization.

³For countries following the recommendations of the IMF's *GFSM 2001*, aggregates should refer to revenue, expense, net acquisition of nonfinancial assets, net acquisition of financial assets, and net incurrence of liabilities.

⁴Dissemination as part of a high-frequency (for example, monthly) publication.

External Sector				
Balance of payments aggregates	Imports and exports of goods and services, current account balance, reserves, overall balance		Annual (quarterly encouraged)	6 months
External debt and debt-service schedule	Public and publicly guaranteed external debt, broken down by maturity		Quarterly	1–2 quarters
	Public and publicly guaranteed external debt-service schedule		Twice yearly with data for 4 quarters and 2 semesters ahead	3–6 months
		Private external debt not publicly guaranteed, and debt-service schedule	Annual	6–9 months
International reserves	Gross official reserves expressed in U.S. dollars	Reserve-related liabilities	Monthly	1–4 weeks
Merchandise trade	Total exports and total imports	Major commodity breakdowns with longer time lapse	Monthly	8–12 weeks
Exchange rates	Spot rates		Daily	

Table 3.1 (continued)
C. Sociodemographic Data

Data Categories	Basic Components	Encouraged Extension(s)	Related Indicators of Millennium Development Goals (MDGs) ⁵	Periodicity	Timeliness
Population	Population characteristics: Size and composition of the population, derived from census, surveys, or vital registration system	Disaggregation of population and vital statistics data by age, gender, and region, as appropriate		Annual (census every 10 years)	3–6 months for annual updates; 9–12 months for census
	Dynamics of growth: Vital statistics: births, deaths, and migration	Reporting of mortality rates, crude birth rate, fertility rate, and life expectancy	13. Under-five mortality rate 14. Infant mortality rate		
Education	Inputs: Measures of current financial, human, and physical resources available to public and private (if significant) educational institutions, recorded by level of education or type of program	Disaggregation of data by region is recommended for all data categories. Characteristics of teaching staff, including training, experience, and terms of employment (full or part time). Expenditures by households on education (including fees and other expenses for public or private education).		Annual	6–12 months following beginning of school year
	Process: Measures of student progress through school, such as enrollments, dropouts, and repetitions, recorded by level of education and gender of students	Calculation of net enrollment rates (by grade and gender)	6. Net enrollment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 9. Ratio of girls to boys in primary, secondary, and tertiary education		
	Outcomes: Educational attainment measured by progress through school, graduations, and completions by level; literacy	Disaggregation by age and gender: Graduation and completion rates. Scores on standardized achievement exams	8. Literacy rate of 15–24 year olds 10. Ratio of literate women to men 15–24 years old		
Health	Inputs: Measures of current financial, human, and physical resources available to public and private (if significant) health system, including public expenditures on health services; capacity of health care facilities by location and type of facility; and the number of trained personnel by location and certification	Private (household) expenditures on health services. Disaggregation of data by region.		Annual (outbreaks of contagious diseases should be reported at higher frequency and with greater timeliness)	3–6 months following end of reference period

⁵As documented (and numbered) in the Millennium Indicators Database of the United Nations Statistical Division (see Appendix I).

Table 3.1 (continued)
C. Sociodemographic Data

Data Categories	Basic Components	Encouraged Extension(s)	Related Indicators of Millennium Development Goals (MDGs)⁵	Periodicity	Timeliness
Population	Population characteristics: Size and composition of the population, derived from census, surveys, or vital registration system	Disaggregation of population and vital statistics data by age, gender, and region, as appropriate		Annual (census every 10 years)	3–6 months for annual updates; 9–12 months for census
	Dynamics of growth: Vital statistics: births, deaths, and migration	Reporting of mortality rates, crude birth rate, fertility rate, and life expectancy	13. Under-five mortality rate 14. Infant mortality rate		
Education	Inputs: Measures of current financial, human, and physical resources available to public and private (if significant) educational institutions, recorded by level of education or type of program	Disaggregation of data by region is recommended for all data categories. Characteristics of teaching staff, including training, experience, and terms of employment (full or part time). Expenditures by households on education (including fees and other expenses for public or private education).		Annual	6–12 months following beginning of school year
	Process: Measures of student progress through school, such as enrollments, dropouts, and repetitions, recorded by level of education and gender of students	Calculation of net enrollment rates (by grade and gender)	6. Net enrollment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 9. Ratio of girls to boys in primary, secondary, and tertiary education		
	Outcomes: Educational attainment measured by progress through school, graduations, and completions by level; literacy	Disaggregation by age and gender: Graduation and completion rates. Scores on standardized achievement exams	8. Literacy rate of 15–24 year olds 10. Ratio of literate women to men 15–24 years old		
Health	Inputs: Measures of current financial, human, and physical resources available to public and private (if significant) health system, including public expenditures on health services; capacity of health care facilities by location and type of facility; and the number of trained personnel by location and certification	Private (household) expenditures on health services. Disaggregation of data by region.		Annual (outbreaks of contagious diseases should be reported at higher frequency and with greater timeliness)	3–6 months following end of reference period

⁵As documented (and numbered) in the Millennium Indicators Database of the United Nations Statistical Division (see Appendix I).

Table 3.1 (continued)
C. Sociodemographic Data (continued)

Data Categories	Basic Components	Encouraged Extension(s)	Related Indicators of Millennium Development Goals (MDGs) ⁵	Periodicity	Timeliness
	Process (service delivery): Measures describing the number of clients served and type of care provided by public and private care providers, including inpatient, outpatient, and preventive care; population served by public health services such as immunizations, sanitation services, and improved water supply	Measures of the responsiveness of the health system to nonhealth aspects of service delivery. Disaggregation of data by region.	15. Proportion of 1-year-old children immunized against measles 17. Proportion of births attended by skilled health personnel 19. Condom use rate of the contraceptive prevalence rate 22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures 24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course 30. Proportion of population with sustainable access to an improved water source, urban and rural 31. Proportion of urban population with access to improved sanitation		
	Outcomes: Statistics on mortality and morbidity, including mortality by cause and the incidence of disease by age, gender, region, and other patient characteristics		4. Prevalence of underweight children under five years of age 16. Maternal mortality ratio 18. HIV prevalence among 15- to 24-year-old pregnant women 20. Number of children orphaned by HIV/AIDS 21. Prevalence and death rates associated with malaria 23. Prevalence and death rates associated with tuberculosis		
Poverty	Income poverty: Number and proportion of people or households with less than minimum standard of income or consumption; valuation of minimum consumption bundle	Measures of the distribution of household or per capita income or consumption, and incidence of low consumption	1. Proportion of population below US\$1 (PPP) per day 2. Poverty gap ratio (incidence x depth of poverty) 3. Share of poorest quintile in national consumption	3–5 years	6–12 months following the survey
	Other poverty measures: Measures of deprivation or insecurity used to identify the population living in poverty, such as evidence of malnutrition, endemic diseases, educational achievement, and lack of access to basic services	Separate poverty estimates for urban and rural populations or for major regions, states, or provinces. Disaggregation of data by region.			

ANNEX 3. DESCRIPTION OF STANDARD INTERNATIONAL SURVEYS

The following descriptions are mainly coming from two sources:

- “*Indicators for monitoring the Millennium Development Goals. Definition, rationale, concept and sources*”. United Nations Development Group Led by United Nations Population Fund, United Nations Development Program, Department of Economic and Social Affairs–Statistics Division. New York. 2003.
- The International Household Survey Network 2006. (www.internationalsurveynetwork.org).

MULTIPLE INDICATOR CLUSTER SURVEY

The Multiple Indicator Cluster Survey (MICS) is a household survey program developed by UNICEF to assist countries in filling data gaps for monitoring the situation of children and women. It is capable of producing statistically sound, internationally comparable estimates of these indicators.

The MICS was originally developed in response to the World Summit for Children to measure progress towards an internationally agreed set of mid-decade goals. The first round of MICS was conducted around 1995 in more than 60 countries. The current round (MICS3) is focused on providing a monitoring tool for the World Fit for Children, the Millennium Development Goals (MDGs), as well as for other major international commitments such as the UNGASS on HIV/AIDS and the Abuja targets for malaria. 21 of the 48 MDG indicators can be collected in the current round of MICS, offering the largest single source of data for MDG monitoring. The current plans call for surveys to be executed in more than 50 countries. The survey questionnaires are modular tools that can be customized to the needs of a country. They consist of 3 questionnaires: a household questionnaire, a questionnaire for women aged 15-49, and a questionnaire for children under the age of 5 (addressed to the mother or primary caretaker of the child). The main subjects of MICS2 are health and education. MICS surveys are conducted every 5 years.

More information can be found at <http://www.childinfo.org>.

DEMOGRAPHIC AND HEALTH SURVEY

Demographic and Health Surveys (DHS) are sponsored by the United States Agency for International Development and undertaken by Macro International, Inc. They were first conducted in 1984 as successors to the International Statistical Institute World Fertility Surveys. The Demographic Health Surveys are now in their fourth series.

Demographic and Health Surveys (DHS) are nationally representative household surveys with large sample sizes (usually between 5,000 and 30,000 households). DHS surveys provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition. But they also include other topics, such as education. Typically, DHS surveys are conducted every 5 years, to allow comparisons over time.

The basic approach of the DHS program is to collect and make available data that are comparable across countries. To achieve this, DHS works to ensure that proper guidance is in place, budgets and schedules are managed, and standard procedures are followed. DHS Surveys are normally conducted in four phases over a period of 18-20 months. To collect data that are comparable across countries, standard model questionnaires have been developed, along with a written description of why certain questions or sections have been included.

DHS Indicators are covering the following topics:

- **Anaemia** - prevalence of anaemia, iron supplementation
- **Child Health** - vaccinations, childhood illness
- **Education** - highest level achieved, school enrolment
- **Family Planning** knowledge and use of family planning, attitudes
- **Female Genital Cutting** - prevalence of and attitudes about female genital cutting

- **Fertility and Fertility Preferences** - total fertility rate, desired family size, marriage and sexual activity
- **Gender/Domestic Violence** - history of domestic violence, frequency and consequences of violence
- **HIV/AIDS Knowledge, Attitudes, and Behaviour** - knowledge of HIV prevention, misconceptions, stigma, higher-risk sexual behaviour
- **HIV Prevalence** - Prevalence of HIV by demographic and behavioural characteristics
- **Household and Respondent Characteristics**- electricity, access to water, possessions, education and school attendance, employment
- **Infant and Child Mortality** - infant and child mortality rates
- **Malaria** - knowledge about malaria transmission, use of bed nets among children and women, frequency and treatment of fever
- **Maternal Health** - access to antenatal, delivery and postnatal care
- **Maternal Mortality** - maternal mortality ratio
- **Nutrition** - breastfeeding, vitamin supplementation, anthropometry, anaemia
- **Wealth/Socioeconomics** - division of households into 5 wealth quintiles to show relationship between wealth, population and health indicators
- **Women's Empowerment** - gender attitudes, women's decision making power, education and employment of men vs. women

More information can be found at www.measuredhs.com .

LIVING STANDARDS MEASUREMENT STUDY

The LSMS was designed as a multi-faceted program to:

- a. improve the quality of household survey data;
- b. increase the capacity of statistical institutes to perform household surveys;
- c. improve the ability of statistical institutes to analyze household survey data for policy needs; and
- d. provide policy makers with data that can be used to understand the determinants of observed social and economic outcomes.

Phase I of the study was a five-year comprehensive review of existing household surveys, and extensive consultations with researchers and policymakers to determine the types of data needed.

In Phase II, LSMS surveys became increasingly customized to fit specific country circumstances, including policy issues, social and economic characteristics, and local household survey traditions. The result of Phase II was to develop improved methodology for:

- a. questionnaire design;
- b. field work;
- c. data entry and processing; and
- d. analysis.

Phase III of the LSMS has concentrated on:

- a. disseminating methodological tools for implementing and analyzing household surveys; and
- b. archiving, documenting, and distributing information on the survey data that have been collected through the study.

Phase IV will focus on how to continue to improve the collection. It will also create new tools and update existing ones to expand the dissemination of literature, knowledge and results in the area of survey methodology in developing countries. Over 60 LSMS surveys have been carried out in over 40 [countries](#). Detailed information on the LSMS methodology is available in a 3-volume publication on [Designing Household Survey Questionnaires for Developing Countries. Lessons from 15 years of the Living Standards Measurement Study](#) (World Bank, 2000).

More information can be found at <http://www.worldbank.org/lms>.

CORE WELFARE INDICATORS QUESTIONNAIRE SURVEY

Developed jointly by the World Bank with UNDP and UNICEF, the Core Welfare Indicators Questionnaire (CWIQ) is designed to monitor social indicators in Africa on an annual basis. The CWIQ shows who is, and who is not, benefiting from actions designed to improve social and economic conditions. The CWIQ collects (i) indicators of household well-being; and, (ii) indicators of access, usage and satisfaction with community and other basic services.

The CWIQ provides rapid monitoring of key indicators for different population subgroups, including by wealth quintile (wealth being estimated using poverty predictors). Rapid implementation is ensured by short questionnaires applied in a single short survey. The questionnaires are relatively short (about eight sides), but other modules may be added. The structure of the questionnaire is the arrangement and sequencing of multiple choice questions for easy and rapid data collections. The processing strategy uses scanning technology, and data entry is done through scanning. The results are intended to be available within a few weeks of data collection. One critical benefit and objective of the CWIQ is the interaction of survey statisticians and the data processor.

The surveys are intended to be annual and to have samples of 5,000 to 15,000 households. The questionnaire is designed to complement other surveys as part of a national monitoring package. Even though useful in all developing countries, the CWIQ has been applied in Africa only.

More information can be found at <http://www4.worldbank.org/afr/stats/cwiq.cfm> .

WORLD HEALTH SURVEYS (WHS)

The World Health Organization (WHO) has developed and implemented a Survey Program and a World Health Survey to compile comprehensive baseline information on the health of populations and on the outcomes associated with the investment in health systems; baseline evidence on the way health systems are currently functioning; and, ability to monitor inputs, functions, and outcomes.

The World Health Survey offers a menu of modules for various components. Each country can choose from these modules or may add additional ones. The modules cover the following:

- Health states of populations.
- Risk factors (e.g. tobacco, alcohol, pollution) and their association with health states.
- Responsiveness of health systems.
- Coverage, access and utilization of key health services (e.g. immunization, treatment of childhood illness, sexually transmitted diseases and HIV/AIDS).
- Health care expenditures.

Over 70 countries are registered participants in the following WHO regions: Africa, Eastern Mediterranean, Europe, region of the Americas, South East Asia and Western Pacific.

More information can be found at <http://www.who.int/healthinfo/survey/en/index.html>

HOUSEHOLD BUDGET SURVEYS

Household budget surveys (HBS) are intended for various purposes, including measurement of poverty and of household consumption of goods and services for weighting consumer prices. Their value as sources of other data derive from the inclusion of a variety of questions among basic or general variables. This offers the possibility of cross-classifying them against many other variables, including income and urban or rural location as well as all the common classifiers such as age and gender.

The surveys are complex and expensive, so they are not conducted very frequently in developing countries. They are undertaken often enough (perhaps every five years or so) in many countries to provide fairly up-to-date and fairly frequent data, however.

The Income Consumption and Expenditure Survey (ICES) in Zimbabwe is an example of a household budget survey. The 2001 survey is the most recent, and the ICES has been conducted there approximately every five years since 1985.

LABOUR FORCE SURVEYS

Labour force surveys (LFS) have become widespread in industrialized countries, but are more rare in developing countries. They are intended to provide information on employment and unemployment, but they also frequently seek information on education and training and may include other variables. They occasionally include questions on income from employment. For reasons of efficiency, they generally cover the non-institutional population. In developing countries, they are often undertaken only in urban areas

SURVEYS WITH AN INSTITUTIONAL COMPONENT

Some household surveys are also accompanied by surveys addressed to local institutions, including schools and hospitals. The Zimbabwe Sentinel Surveillance Survey, for example, includes institutional components addressed to schools and to health establishments. Thus they are able to provide data on facilities serving households.

CENSUSES OF POPULATION AND HOUSING

A population census is the primary source of information about the number of people in a country and the characteristics of the population. Several features distinguish a census from survey-based sources of data. It can achieve complete coverage of the population. It offers possibilities for relating individual characteristics of the population with those of households. It provides details about subnational population groups. Owing to its high cost, it has the disadvantage of being able to provide data only once every 10 years, or sometimes less, and the questionnaires have to be relatively short.

The census is the unique basic source of benchmark demographic data, such as number of people by age and gender. Demographic data are used as denominators for ratios of all kinds, on school enrolment for example, and for many other common country assessment and Millennium Development Goals indicators. However, population estimates have to be updated between censuses, and national methods and standards can differ. Many international agencies use United Nations estimates of population as denominators for ratios in order to be consistent between countries. Nevertheless, the United Nations population estimates, which are revised every two years, are often different from the national estimates, mainly (but not always) as a result of international standardization.

Censuses are also sometimes used as sampling frames for sample surveys.

OTHER SURVEYS

There are also many household surveys of variable frequency, or ad hoc, that are either general in their purpose or have a limited range of purposes. There are special surveys on particular topics, such as some limited aspect of health.

Survey programs pertinent to the data for common country assessment and Millennium Development Goals indicators, in addition to those mentioned above, include the following:

- HIV/AIDS, various epidemiological surveys (Joint United Nations Program on HIV/AIDS)
- Tuberculosis/DOTS (notification program); Roll Back Malaria (World Health Organization)
- Pilot surveys in selected countries to test/improve methodologies of data collection on labour force (International Labour Organization)
- Child labour survey (International Labour Organization)

- Informal sector surveys (International Labour Organization)
- Pilot surveys in selected countries to test/improve methodologies of data collection on nutrition (Food and Agriculture Organization of the United Nations)
- Pilot small-scale studies on education/literacy (United Nations Educational, Scientific and Cultural Organization)
- Access to personal computers and the Internet (International Telecommunication Union)
- Secure tenure and slum improvement (United Nations Human Settlements Program)

ADMINISTRATIVE SOURCES

The most commonly used sources of data for education, and often for health, are administrative sources data derived from the administration of education or health. Unemployment data are also frequently derived from administrative registrations of employment offices.

The data are made available by ministries and sometimes by national statistical offices. Data on births and deaths are also frequently drawn from administrative sources, usually vital statistics registration systems. Administrative sources can potentially provide data for very small areas. Their disadvantages include bias, application of national standards and definitions, and non-response. For vital statistics, such as births and deaths, and for many other indicators, the data often do not exist or are incomplete.

**ANNEX 4. LOG FRAMES OF THE THREE ACTION PLAN
COMPONENTS**

Component 1: Strengthening the Official statistics legal framework and governance, and the management of the BSS resources

	Description	Indicators	Source of verification	Assumptions
Specific objective	To strengthen the Official Statistics legal framework, the BSS governance and the management of the BSS resources.	Existing Statistics Acts and opinion on the implementation of the NSDS Action Plan	Evaluation report of the NSDS Action Plan	
Results	1. The Statistics Act is adopted and implemented. 2. The coordination is organised between the BSS partners in the framework of the Statistics Act. 3. The BSS annual work program is coordinated. 4. The NSDS implementation is reviewed every 5 years and the NSDS is updated. 5. An overall human resource policy framework is agreed between the BSS and the RCSC, and implemented. 6. The use of HR for statistical purpose in the Dzongkhag is rationalized. 7. The BSS staff is trained according to a training program. 8. A BSS-wide financing strategy is defined and implemented for official statistics. 9. The BSS partners are sharing costly technical resources in order to make an efficient use of these technical resources and the staff in charge of their management (GIS). 10. The BSS partners refer to a common list of technical standards (hardware, software)	Statistics Act published Number of Statistics Act communication material disseminated Number of NSTC meetings The BSS annual work program and list of surveys exists The NSB is managing the BSS technical staff Agreement of the NSTC on the HR technical staff in the dzongkhags Assessment of the training workplan is positive. Existing BSS common financial rules Number of maps produced by NSB for other BSS partners Existing list of technical standards	Resolutions of the National Assembly of Bhutan BSS partners NSTC minutes NSTC minutes Kuensel Minutes of the meeting between the BSS/NSB and RCSC Minutes of the NSTC Training workplan assessment report NSTC minutes BSS partners NSTC Minutes	No departure of a significant number of the most qualified BSS technical staff

	Description	Indicators	Source of verification	Assumptions
Activities	1.1 Finalisation of the Statistics Act and discussion between the BSS partners. 1.2 Promotion of the Statistics Act to the users and the data providers. 1.4 Review of the data processing and dissemination processes to assess the data confidentiality management. 2.1 Organisation of the NSTC work: regulation; work plan. 3.1 Preparation of the BSS annual work program and budget by the NSB and partners. 3.2 Adoption of the annual work program and budget by the NSTC 3.3 Publication of the BSS annual list of surveys and censuses and of the calendar of the BSS publications issues 3.4 Preparation of the annual work program implementation reports and BSS synthesis report 4.1 Assessment report on the 5-year NSDS implementation 4.2 Assessment report on the user needs and satisfaction 4.3 Review of the reports by the NSTC and update of the NSDS 5.1 Definition of a new career structure for the BSS technical staff 5.2 Definition of the NSB and NSTC roles for the management of the BSS technical staff 5.3 Description of all the positions of the BSS technical staff (occupied and vacant) 5.4 Organisation of the technical staff mobility (including out posting) 6.1 Definition of an organisational model for the use of technical staff for statistical activities at the Dzongkhag level 6.2 Agreement of the BSS partners on the rationalised	<u>Means:</u> Technical assistance Workshops and training sessions Communication materials Training materials 1 full-time staff for coordination in the NSB		The proposed Statistics Act is adopted by the Government and the National Assembly before end 2009) The NSTC members are quickly appointed after the adoption of the Act Agreement of the RCSC and the BSS partners on the Human resource policy framework.

	Description	Indicators	Source of verification	Assumptions
	used of the statistical staff at the Dzongkhag level. 7.1 Assessment of the BSS staff statistical training needs 7.2 Development of the BSS statistical training program 7.3 Organisation of the statistical training sessions 7.4 Assessment of the statistical training program 8.1 Definition of a set of common financial rules for the BSS (ex: surveyors' rates, consultants' rates, cf. also the publication pricing policy, exchange of services between the BSS partners). 8.2 Implementation of the BSS common financial rules 9.1 Definition of a service level agreement framework for the provision of GIS services by the NSB. 9.2 Provision of GIS services by the NSB to the BSS partners (survey management and data presentation). 10.1 Definition of a list of standard software and hardware enabling easy exchange of data and implementation of common training for all the BSS staff 10.2 The BSS partners refer to the list of standard software and hardware when purchasing some ones.			Agreement of the MoHA and the BSS partners on the organisation of statistical work in the Dzongkhags
			<u>Pre-condition</u>	The adoption of the Statistics Act in 2009 is a priority for the Government

Component 2: the BSS statistical production

	Description	Indicators	Source of verification	Assumptions
Specific objective	Increase official statistics availability to fulfill the user needs	Availability of all the MDG indicators and 10thFYP indicators	MDG report 10th FYP report	
Results	1. The use of administrative data sources is developed. 2. A well-coordinated program of surveys and censuses is implemented. 3. The business statistics are strengthened. 4. Concepts and classifications used by the BSS partners are harmonised 5. The National accounts are strengthened. 6. The dataflow is streamlined among the data producers. 7. The BSS produce thematic reports and value-added statistics product 8. The quality of official statistics is improved.	New administrative data sources are used to produce yearly data All the multi yearly and yearly surveys planed are implemented during the period The scope of business statistics available in the Year Book is extended 80% of the statistical operations planed in the BSS annual work program are conducted Supply and use table and sector accounts are available in 2013 More than 75% of the BSS partners receive data from at least one BSS partner At least 40 days*staff training on quality during the period Quality reports on 3 fields exist	BSS Annual work program reports Statistical publications Statistical Yearbook BSS Annual work program reports National account report Survey among BSS partners Training program assessment report Quality reports	
Activities	1.1 Development of the use of administrative sources for an annual production of data in the following fields: a. education, b. health, c. vital statistics d. tourism e. transport f. energy	<u>Means:</u> Technical assistance Surveyors Transport Survey materials Publication printing Workshops and training sessions Study visits		Funding of the surveys is ensured either by the government or by donors No departure of a significant number of the most qualified BSS technical staff

	Description	Indicators	Source of verification	Assumptions
	g. employment h. business i. external trade j. budget and finance 2.1 Implementation of the following surveys according to a multiannual program, during the next five years: a. BLSS b. Demographic and health survey c. Multi sector survey, d. RNR census 2.2 Implementation of the yearly programme of following surveys: a. Labour force survey (urban areas) b. RNR crop survey c. Business survey 2.3 Implementation of the quarterly program of following surveys: a. Consumer price survey b. Production price survey c. Service sector survey 2.4 Preparation of the next Population and Housing census. 3.1 Feasibility study to improve the business statistics 3.2 Development of a business sample frame (business register) 3.3 Improvement of the business statistics on large size business using administrative sources 3.4 Improvement of the business statistics on small and medium size business through a business survey 4.1 Harmonisation of concepts and classifications used by the BSS partners 5.1 Complete the implementation of SNA 93. 6.1 Creation of a newsletter to develop the	Training materials		

	Description	Indicators	Source of verification	Assumptions
	communication between the data producers about the availability of new data 6.2 Definition of data exchange formats 6.3 Exchange of data and metadata among the producers. 7.1 Production of thematic reports 7.2 Production of value-added statistics products relying on GIS 8.1 Develop the quality culture among the BSS staff through training. 8.2 Data quality assessment of the main statistical operations and preparation of improvement plans. 8.3 Development of the metadata 8.4 Dissemination of data quality reports for the main statistical operations.			
			<u>Pre-condition</u>	

Component 3: the BSS statistical dissemination

	Description	Indicators	Source of verification	Assumptions
Objective	Offer the users an easier access to the data	More than 50% of the users considered there is an easy access to the data	User satisfaction survey	
Results	1. The BSS partners have developed a common dissemination policy that they implement. 2. The BSS partners have increased the amount and the timeliness of the data available to the users. 3. The NSB is a focal point for the data dissemination to the users.	Existing common dissemination policy document More than 50% of the data delivered comply with the timeliness objective More than 50% of users consider the NSB as a focal point for official statistics	NSTC minutes BSS annual work program report User satisfaction survey	NSB web access has been speed up.
Activities	1.1 Definition of a common dissemination policy 1.2 Publication of a BSS newsletter 1.3 Production of the BSS yearly catalogue of publications (along with the work plan) 1.4 Development of a common data warehouse 1.5 Development of a common metadata dictionary 2.1 Improvement of the timeliness of the dissemination of the existing publications: improvement plan per sector and implementation a. quarterly publications : no later than 2 months after the end of the reference quarter b. yearly publications : no later than 6 months after the end of the reference year 2.2 Extension of the quarterly dissemination to available data on: external trade, tourism, electricity 3.1 Management by the NSB of the central repository of all the BSS publications and public data bases 3.2 Dissemination by the NSB of all the BSS publications to the users upon request 3.3 Adaptation of the NSB web site to a BSS entry	<u>Means:</u> Technical assistance Publication printing Statistical database software Study visits Training materials		

	Description	Indicators	Source of verification	Assumptions
	point website			
			<u>Pre-condition</u>	.

ANNEX 5. LIST OF PARTICIPANTS TO THE TECHNICAL WORKING GROUP AND THE NSDS CONSULTATIVE WORKSHOP

Ministry/Agency	Name of the Participants	Designation
Ministry of Agriculture	Karpo Dukpa	Statistical Officer
Ministry of Economic Affairs	Gem Dorji	Executive Engineer
Ministry of Education	Singye Dorji	Planning Officer
	Sangay Choden	Statistical Officer
Ministry of Finance	Tshering Dorji	Statistical Officer
Ministry of Health	Kado Zangmo	Information & Media Officer
	Sonam Phuntsho	Asst. Planning Officer
	Dorji Pelzom	Statistical Officer
Ministry of Information & Communications	Yeshey	Asst. Planning Officer
Ministry of Labour & Human Resources	Ugyen Tenzin	Statistical Officer
Ministry of Home & Cultural Affairs	Jigme Cheda	ICT Officer
Ministry of Works & Human Settlement	Lhaden Pema	Chief Planning Officer
Gross National Happiness Commission	Rinzin Wangmo	Planning Officer
National Environment Commission	Rinzin Namgyel	Information Manager
Centre for Bhutan Studies	Karma Galay	Chief Researcher
Royal Civil Service Commission	Tobden	Statistical Officer
Royal Monetary Authority	Sonam Dema	Research Officer
	Chencho Dorji	Research Officer
UNICEF	Alexandru Nartea	M&E Officer
Food Agriculture Organization	Phintsho Dorji	Asst. FAO Representative
World Food Program	Udaya Sharma	Program Assistant
Liaison office of Denmark	Karma Dema	Program Officer
National Statistics Bureau	Kuenga Tshering	Director
	Jyamyang Galay	Chief Statistical Officer
	Dechen Wangdhi	Dy. Chief Statistical Officer
	Khandu Dorji	Sr. Statistical Officer
	Phub Sangay	Sr. Statistical Officer Sr.
	Dawa	Sr. Statistical Officer
	Cheku Dorji	Statistical Officer
	Jigme Nidup	Statistical Officer
	Sonam Laendup	Asst. Statistical Officer
	Cheda Jamtsho	Asst. Statistical Officer
	Sonam Gyeltshen	Asst. Statistical Officer
	Sangay Dorji	Statistical Investigator
	Dorji Phuntsho	Statistical Investigator
	Sangay Tempa	NSDS Consultant
	Jean-Michel Emprou	NSDS Consultant

**ANNEX 6. THE ASSESSMENT OF BHUTAN STATISTICAL SYSTEM
(BSS) REPORT**

NATIONAL STATISTICS DEVELOPMENT STRATEGY (NSDS)

Annex 6 - Assessment of the BSS Report



National Statistics Bureau
Royal Government of Bhutan

TABLE OF CONTENTS

EXECUTIVE SUMMARY	- 81 -
1 INTRODUCTION	- 84 -
2 THE USERS AND THEIR NEEDS	- 84 -
2.1 Ministries and other government bodies	- 84 -
2.2 Research centres	- 85 -
2.3 Civil society: professional organisations, media	- 86 -
2.4 Donors.....	- 86 -
2.5 BSS Users satisfaction	- 86 -
3 THE BSS AND THE NSB	- 88 -
3.1 History	- 88 -
3.2 Legal and institutional environment.....	- 91 -
3.3 Coordination mechanisms: existing situation	- 92 -
3.4 Assurances of integrity: principles.....	- 92 -
3.5 Resources.....	- 93 -
3.6 The BSS and the decentralisation process.....	- 95 -
4 THE STATISTICAL INFRASTRUCTURE	- 97 -
4.1 Classifications.....	- 97 -
4.2 Concepts and definitions	- 97 -
4.3 Registers and sample frames	- 98 -
5 DATA PRODUCTION	- 99 -
5.1 Demographic and social statistics.....	- 99 -
5.2 Macro economic statistics	- 103 -
5.3 Business statistics.....	- 106 -
5.4 Agriculture and environment statistics	- 108 -
6 DATA DISSEMINATION	- 109 -
6.1 Dissemination policy.....	- 109 -

6.2	Dissemination practices.....	- 109 -
7	CONCLUSIONS: STRENGTHS AND WEAKNESSES OF THE BSS.....	- 111 -
	ANNEXES	- 112 -

Executive Summary

The objectives of the assessment of the Bhutan Statistical System (BSS) are to identify the main issues the National Statistical Development Strategy (NSDS) should address and all the elements already in place on which the BSS should find its future developments.

During the recent years, there has been an increasing awareness for statistics among users and producers of statistics in Bhutan, and especially among the decision-makers. All categories of users recognize the fact that significant and important progress has been made in producing and disseminating statistical data during the past years. Beside the lack of some data, the need for metadata and an improvement of the quality of existing data is being expressed by the users who are today mostly unsatisfied about the current difficulty of accessibility to data. Among the stakeholders in BSS, there is a common and unanimous desire of having a focal agency to ease the situations and deliver all the data, whatever the producer. The National Statistics Bureau (NSB) is expected to be this focal point.

No Statistical Act has yet been promulgated which should define activities, functions and responsibilities of the BSS stakeholders, give them legal authority to undertake their assigned activities, organise statistical coordination and guarantee confidentiality of the information provided by respondents. The Statistical System in Bhutan is decentralised within which most ministries and several agencies collect their own primary data through surveys and censuses, compile and disseminate statistics related to their own fields to meet their analytical and policy needs. The NSB has the mandate to coordinate all statistical activities within the system, these functions and activities are currently very limited.

The BSS is constrained by lack of human, technical and financial resources. There is a limited number of technical or professional staff to carry out its statistical tasks with only a few having the required qualification in statistics (diploma, degree or master). Sectors who are producers of statistics in the BSS generally are well equipped with the needed number of basic hardware equipments: computers, printers, scanners, and plotters. Most sectors have well established setup of LAN network system and ICT section maintaining the Information and Database system. However, there exist problems related to security and safety of the system. Weaknesses in the ICT system is mainly due to unreliable software, use of unlicensed software and absence of archiving facility to securely safeguard all the information, documents, reports, data and results produced in the framework of the censuses and surveys. Besides the government funding provisions to generate statistics, the BSS receives strong support from various donors to conduct surveys and to set up the compilation of administrative data.

As a result of the decentralisation process, there is an increasing demand for data at sub-national local levels, mainly at Dzongkhag and Gewog level. To meet the growing need for statistics for smaller administrative levels, the NSB has posted one Dzongkhag Statistical Officers (DSOs) in each Dzongkhag. The DSOs are responsible and mandated to gather data/ information in coordination with other sector officials within the Dzongkhag. The DSOs have a key role in the BSS to gather data at those levels. Because they are administratively under the Dzongkhag Administration, their focus of work is divided between administrative that overshadows their mandated statistical work. The Dzongkhag Statistical Offices do not have budget allocations to carry out their tasks. With the emerging need for a wide variety of information both at the national and sub-national local levels, existing mandate of the DSOs needs to be strengthened and re-enforced that should define their roles, responsibilities and day to day functions. The placement of DSOs to each dzongkhag should realize the goals initially set at the time of their appointment together with the opening of the Statistical Office in the Dzongkhags.

Within the existing statistical set-up, international classifications, wherever applicable are adopted, although versions used may not always be up-to-date for e.g. the NAS, Disability, Labour Force,

Industrial Classification (the last two digits are national classifications) etc.. The exchange and sharing of data between the producers are limited by lack of unified and consistent coding system in various sectors, as for example, the geographic area codes. Key concepts and definitions used by different producers are not the same such as the households, in the civil registry irrespective of living together or not. Thus, users encounter problems of inconsistencies between data from various sources. This demands the need for collecting and disseminating meta data within the statistical system. There is a good amount of data generated in the Bhutan Statistical System as administrative data in the process of recording the day-to-day activities and services provisions. Such data are available with health, education, agriculture, trade and industry sectors etc. One such example is the Business Registration records. However, the administrative data are not free from errors. The duplication of the business registers limits its use only to keep records of the registrations which otherwise if no duplications or omissions occur could be useful as reliable sample frames for conducting surveys

Data generated in BSS generally are from data collections through censuses, e.g. population census, agricultural census, establishment census etc.) surveys viz; living standard surveys, price collection, labour force surveys, health surveys, agriculture surveys etc; ,and through compilation of administrative data sources, particularly administratively generated data on health, education, external trade, government finance and monetary statistics, energy statistics etc.. Data production processes and activities are being undertaken in isolation without much inter-sectoral coordination among the producers. Nonetheless, the Population and Housing Census of Bhutan 2005 represents a great progress not only in setting a trend for sectoral coordination but also for providing as it gives a strong basis for developing and producing various baseline data. Outpacing demand for data invoke data gaps within the BSS besides the existing need to improve reliability and timeliness of data. Statistics that rely on many data sources, particularly the national accounts statistics, are rather weak due to quality aspect of the input data. The BSS is not yet producing on a regular basis all the data needed to monitor the government policies.

The statistical publications of various sectors have been increasing both in quality and quantity. However, users have difficulties to access and get the desired data owing to dissemination strategy that is not sufficiently user-oriented. The improvement of coordination within the BSS is a good way in providing efficient and effective solutions to the current statistical production and dissemination problems of today.

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
BHMIS	Bhutan Health Management Information System
BLSS	Bhutan Living Standard Survey
BoP	Balance of Payments
BSS	Bhutan Statistical System
BTS	Bhutan Trade Statistics
CBS	Centre for Bhutan Studies
CPI	Consumer Price Index
DHSO	District Health Supervisory Officer
DRC	Department of Revenue and Customs
DSO	District Statistical Officer
EMIS	Education Management Information System
FYP	Five Year Plan
GDP	Gross Domestic Product
GIS	Geographic Information System
GNH	Gross National Happiness
GNHC	Gross National Happiness Commission
IMF	International Monetary Fund
HIES	Household Income and Expenditure Survey
LFS	Labour Force Survey
LMIS	Labour Management Information System
MDGs	Millennium Development Goals
MoA	Ministry of Agriculture
MoE	Ministry of Education
MoEA	Ministry of Economic Affairs
MoF	Ministry of Finance
MoH	Ministry of Health
MoHCA	Ministry of Home and Cultural Affairs
MoIC	Ministry of Information and Communication
MoLHR	Ministry of Labour and Human Resources
MoWHS	Ministry of Works and Human Settlement
NSB	National Statistics Bureau
NSDS	National Statistics Development Strategy
PHCB	Population and Housing Census of Bhutan
PPD	Planning and Programming Division
RCSC	Royal Civil Service Commission
RMA	Royal Monetary Authority

1 Introduction

This report presents the results of the overall assessment and diagnosis of the Bhutan Statistical System (BSS) in relation to the demand for data from the different users.

The assessment has been carried out during the first step of the definition of the National Statistics Development Strategy (NSDS).

The consultants have assessed all areas of statistics in Bhutan, including poverty, economics, social, demographics, and geographical information system (GIS). The analysis has identified linkages between different data collection and user institutions, strengths and weaknesses of existing arrangements, and gaps in the supply of required information. Particular attention has been paid to assessing the capacity of the statistical system to provide data to monitor progress in the RGoB's Five Year Plan (FYP), the Millennium Development Goals (MDGs), and the performance of sector policies and programs.

The consultants have also assessed the feasibility for the system to monitor progress in poverty reduction at the Dzongkhag and/or Gewog level.

The assessment process has involved extensive interviews and discussion with the producers and the users of statistics and review of most of the publications released since 2000.

2 The users and their needs

During the past decade, there has been an increasing awareness on statistics among the users in BSS and especially the decision-makers. Up to 2005, the country's statistical information system was relatively weak due to the lack of statistical data, mainly the population and housing data. The data that existed did not conform to international standards and definitions. The publication of the results of Population and Housing Census of Bhutan 2005, has given a strong basis for a broader use of statistical data.

Evidence-based policy is promoted by His Majesty the King and supported by the Government as the key element of development process. Available statistical data have been greatly used to prepare the 10th FYP. And timely and reliable statistical data are requested to monitor the MDGs as well as planning and programming processes.

All categories of users express that an important progress in producing and disseminating statistical data has been made over the years. The 2005 Population and Housing Census of Bhutan (PHCB) is the most significant operation. Further, the users also point out that there are still some data gaps and that some organisational features hamper accessibility to available data in various agencies.

Four categories of users have been identified during this assessment study: Ministries and Government bodies, Research Centres, professional organisations and media, donors.

2.1 Ministries and other government bodies

Provision of statistical data to the users inside each Ministry is the responsibility of the Planning and Programming Division (PPD), which exists in most of the Ministries. The statistical data are used to program, monitor and evaluate individual Ministry's own activities. A great part of them is produced by the PPD, by other Departments inside a Ministry or by other producers e.g. the National Statistics Bureau (NSB) for the population data. More often, PPDs in a Ministry experience difficulties to access and avail the much needed data from other Ministries.

The Gross National Happiness Commission (GNHC) is the central Government body for coordinating the formulation of all policies, plans and programmes in the country. The GNHC is a key user of statistical data. It needs data on all areas of economic and social activities to build the indicators needed to monitor the implementation of the Five Year Plan. National accounts, consumer price index and fiscal sector data are key data for macro economic planning. More importantly, data that are lacking mainly related to labour e.g. productivity by activity area, time series expenditure data and metadata. The “Bhutan Millenium Development Goals (MDGs) needs assessment and costing report 2006-2015” prepared by the GNHC has also identified insufficient data to build the following MDGs indicators: human poverty index (HPI-1), percentage of population below minimum level of dietary energy consumption (2,124 Kcal), Proportion of population using solid fuels (i.e. wood, charcoal, dung), Youth unemployment rate, Internet users (per 100 persons). The indicators required by the GNHC to monitor the next 10th Five Year Plan are listed in the annex A-1.

The Royal Monetary Authority (RMA) is another important user of statistical data when compiling the Balance of Payment (BoP) and monetary statistics. The RMA produces and disseminates financial statistics published quarterly. Most of the data from financial institutions are readily available for compiling the publication. However, the quality of some data received from other sectors are today its main concern, particularly the input data for the estimations of Gross Domestic Product (GDP) trade data, mainly the import statistics, The GDP estimations are published annually by the National Accounts Statistics Division, National Statistical Bureau whereas it is desirable to have GDP estimates every half yearly which will be useful for monetary policy management..

The NSB is also a user of statistical data when compiling the National Accounts and preparing the Statistical Yearbook of Bhutan. The improvement of the National Accounts quality is dependent in upon the availability of data on a regular basis, particularly those covering the main economic and social domains. National Accounts are currently facing a lack of reliable data for business (especially construction) and agriculture (available data are too old); income and expenditure data should also be available on a more regular basis. Both National Accounts and Yearbook need an improvement in timeliness of data.

The process of decentralisation in development planning has been further reinforced substantially during the 9th FYP period emphasizing on the local level bottoms-up planning process. The Dzongkhag administration has a broad range of activities and there is a need for statistical data for monitoring of local development programs from a decentralisation perspective. A Dzongkhag Statistical Officer (DSO) is placed in each Dzongkhag to fulfil the need and requirement at the local level. The most common data needs at the local level are those that relate to population size, composition, social and economic indicators including poverty statistics down to the village, Gewog and Dzongkhag levels. After the PHCB 2005, the boundaries of some geographic areas have changed for which data for the re-demarcated areas are needed.

2.2 Research centres

There are Research units within the respective sectors that collect, compile and analyse data in specific areas of concern, as for e.g. the Natural Resource Research Centre etc. on renewable natural resource sector. The Centre for Bhutan Studies (CBS) is one of the main research centres, that is currently involved in research on Gross National Happiness, the ultimate development goal in Bhutan. It assists the Gross National Happiness Commission (GNHC) with respect to conceptualizing and developing a practical, target oriented and a measurable Gross National Happiness (GNH) index. In addition, the CBS carries out studies for some sectors, invites and receives many researchers from abroad. According the CBS official met during this study, the main issue is not the lack of statistical data but the accessibility to the existing data. Although a lot of data are now available in Bhutan, yet the main difficulties expressed, are in identifying agencies that produces and disseminates them, as well as problems in accessing information. There are also issues related to their quality, accuracy, consistency, reliability and the availability of the corresponding metadata.

2.3 Civil society: professional organisations, media

The media outlined the impressive strides and progress that has been made by the entire statistical system to produce more statistical data in the recent decade. While the volume and extent of information have increased, problems arise when more than one source produces different and conflicting figures on the same topic confusing the users. Further, users still have a lot of difficulties in accessing and getting the data, especially from producers on time. Statistical publications come out very late with information referring to one or two years in the past. Given these shortcomings, there is a need for a coordinating and regulatory body to streamline statistical activities so users could gain accessibility to statistical data, remove problems of duplication or conflicting figures and that the timeliness of data is improved. The NSB, responsible for producing official statistics and conducting national surveys and census, should be given the responsibility to guarantee the data quality, ease of accessibility and timeliness of data. At the moment all statistical information is published only in English language. This in itself limits the coverage of information to wider users who are non-English readers constituting about 40 % of the total population. The publications of statistical information should be translated into Dzongkha for the benefit of everyone.

Data must be made available both on hard copy in print and soft copies in electronic medium. All information and publications are provided or disseminated free of cost to the users. While it is good to give out for free, it expressed that this is a matter of concern for how long the Government would be able to continue the present practice of disseminating data free of cost. Some fee could be attached for certain data.

2.4 Donors

International cooperation or development partners / donor agencies need statistical data to support a results-based, and target oriented approach in developing policies, plans and programmes that achieves GNH, MDGs and other national priorities. External partners are increasingly relying on country monitoring and evaluation systems during project implementation. And statistical data are essential inputs for these monitoring and evaluation system.

They consider that the Bhutan Statistical System (BSS) should improve and produce, on a regular basis, sets of statistical data encompassing overall social, economic and demographic domains within the purview and emphasis of the national policies. Although there has been a marked improvement in range of data, it becomes available only with too much delay. The data on the same topic is being published by different sources resulting in conflicting figures which is a matter of concern. It is desirable for the BSS to publish or deliver not just the raw data in simple tables but improve the publications and the dissemination of different figures for the same topic. The BSS should also deliver to users by including indicators, comments, in-depth analysis and providing the metadata. Data are most frequently needed disaggregated at Dzongkhag and Gewog levels.

2.5 BSS Users satisfaction

In an effort to orient the NSB activities to the best fulfilment of user, the National Statistics Bureau carried out the customer satisfaction survey in 2007. The objective of the survey was mainly to get feedback on the performance of the organisation and gauge needs and problems of the users. Of all the agencies to which the survey questionnaire had been distributed, twenty-two government bodies responded to the questionnaire. Results of the survey indicated that most stakeholders were, although satisfied with the statistical services provided, yet they felt the range of services provided by NSB should improve and the standards and quality of services be enhanced.

Beside the lack of some data, the need for metadata and an improvement of the quality of existing data is being expressed by the current users who are today mostly unsatisfied about the difficulty of accessibility to data. Among the stakeholders in BSS, there is a common and unanimous desire of having a focal agency to ease the situations and improve delivery of all statistical data, whoever be

the producer. As there is already the NSB which is providing the statistical service, it is expected that NSB be given this responsibility of a focal point in the BSS.

3 The BSS and the NSB

3.1 History

DEVELOPMENT OF BHUTAN STATISTICAL SYSTEM

Importance placed on the need and use of statistical data could be traced right into the long history of Bhutan. One of the important landmarks of data collection may be associated to the first count of census taken during the reign of Desi Chogyal Sherub Wangchuk (1744-1763). Since then, the census continued annually, mainly to establish the count of the population, which formed the basis for taxation and mobilization of labour.

Scope of data collection grew since the beginning of Five Year Plans in 1961, when the first Five Year Plan (1961/62 to 1965/66) was formulated and implemented for which the Development Secretariat was then established responsible for implementation of the plans. With the expansion of socio-economic development over the years, need for more information became inevitable. A Statistical Cell responsible to meet the need of statistical data was established within the then Ministry of Development in 1971.

With the expansion of development activities in the country and to consolidate the planning process, the Planning Commission was established in 1978 at the time of preparation of the Third Five Year Plan headed by His Majesty the King.

The Cell was upgraded to a Divisional status and re-organized under the Planning Commission and named as the “Central Statistical Organization” (CSO) in 1979. The main responsibilities of the CSO were to collect, compile, analyse and publish official statistics pertaining to various sectors to facilitate the planning and policy making process. Since then, the CSO functioned as an agency to generate official statistics at regular intervals and conduct national surveys and censuses. With the process of decentralized planning process in early 1980s, the CSO resulted into the increase in workload at the face of an already acute shortage of manpower, financial resources on the one hand and an increasing pressure for production of statistics at national as well as for lower administrative levels, added on to it by issues of duplication of data, incoherence and timeliness, reliability and inconsistencies in the data produced.

To overcome emerging data gaps and the issues, the CSO posted Dzongkhag Statisticians in few selected dzongkhags to improve coordination in the collection and flow of statistical information. The Statistical staffs were under the administration of the Dzongdas both financially and administratively. Gradually, the affiliation of statisticians with the dzongkhag administrations became stronger by the year and finally lost the staff to the dzongkhag administration cutting off any control over them by the CSO. This was a great setback to the already weak human resource status of the then CSO. As a consequence, the Planning Commission undertook a study to review Statistical System and the situation of the CSO in 1994 to identify problems and come up with a strategy to further strengthen it.

In January 1984, the FAO Food Security Mission submitted a project proposal for crop forecasting and agricultural data collection in Bhutan. There arose the need to review the capacity to collect process and analyse data within the Statistical Agency, the CSO. This resulted into the support of the UNDP project (BHU/85/001) – the Strengthening of the Statistical Organization. Under this project, the CSO received trainings, equipment and technical assistance for conducting statistical surveys and census, compilation, analysis and production of publication. It was during this time that CSO began to produce publications in standard formats on a regular basis.

The study of 1994 assessed the situation and status of CSO, its capacity, responsibilities, functions, and shortcomings to identify the problems for the Statistical System to strengthen and prepare to meet the upcoming challenges. The following observations were made:

- 1) By 1994, the CSO has grown considerably to a full division consisting of six main sub-units viz: i) National Statistics Unit; ii) Foreign Trade and Industrial Statistics Unit; iii) Demographic and Social Statistics Unit; iv) Consumer Price Index (CPI) Unit; v) Agriculture Statistics Unit vi) Sample Survey and Data Processing Unit.
- 2) There were 27 staff members with basic trainings/diploma in statistics, Surveys/Census methods, computer programming and general statistics.
- 3) Trainings were given priority in the earlier years in order to be able to deal with the specialized technical subject and to effectively carry out the collection, compilation, data processing, analysis and publication of statistical reports
- 4) Main publications published by CSO included Statistical Yearbook of Bhutan, Consumer Price Index (half yearly for Bhutan and quarterly for Thimphu city), Food Price Index, National Accounts Statistics (GDP estimates), Foreign Trade Statistics, and in addition designed, planned, and executed periodical/adhoc statistical surveys

The problems facing the then CSO were the following:-

i) Overall problems in the system

- 1) Lack of cooperation and closer coordination from user-Ministries/Agencies
- 2) Lack of sufficient number of qualified personnel
- 3) Inadequate supplies of stationery/equipments
- 4) No provision of independent budgetary allocation for CSO

ii) Staffing problems

- 1) Except for three, the staff of the CSO were all non-graduates with only basic trainings.
- 2) There was the need for professional development through trainings of staff at the long term degree level.

iii) Transport

- 1) There is not a single vehicle for transport in the CSO
- 2) CSO had to coordinate survey and data collection, for which transport facility would enhance the smooth functioning

iv) Equipment

- 1) CSO had 11 computers; only 3 units are IBM 386 computers and the rest are all 286 and XT which are very slow and of low memory power.
- 2) For voluminous and quick survey results, all the nine XT computers needs to be replaced by higher versions such as 386/486

v) Furniture

- 1) CSO did not have enough furniture for the staff and those that exists are in dilapidated condition
- 2) Procurement of additional furniture and repairs to existing ones are necessary for proper upkeep, management and safety of the office

vi) Sectoral coordination

- 1) Poor co-ordination from concerned organizations/agencies
- 2) Regular sector data are not availed from sector at the time needed and are not supplied in the format prescribed for the regular publications
- 3) The data of the sectors are not up-to-date
- 4) This poses problems in publication and time-lags in compilation of reports
- 5) Organisation and agencies generate their own statistics through conducting surveys and do not liaise closely with CSO resulting into duplication of efforts and contradicting figures

vii) Budget

- 1) No Program budget is allocated separately for CSO to conduct statistical surveys and collection work
- 2) Funding for surveys are done through supplementary budget from the Ministry of Finance

- 3) This results into adhoc nature of survey activities and delays in process
- 4) No adequate and timely supply of stationery for printing and publication

Because of the 1994 recommendations, six sector statistical officers were pulled from line Ministries into the CSO to reinforce and strengthen the capacity of catering to the needs of users effectively.

Later on, the degree of complexity and volume of statistical information needed by the ever expanding program of the different ministries outpaced the developments within the CSO and the statistical system. The range of data needed as well expanded together with the expansion of scope of planning activities.

Between December 1998 and 1999 there was another round of review of the Statistical System and on strengthening the BSS. Although there were several efforts in the past by the government to strengthen and streamline statistical activities in the country, the impact of these were minimal. The most recent effort was the centralization policy initiated in 1994 where all the statistical activities of the sectors along with their statistical staff (a total of six persons from various Ministries) were pulled into the CSO office. The main rationale behind the centralization was to bring about consistency and also to pool in resources to overcome and do away with the duplication of efforts. This strategy, however did not materialize as the proposal was not carried out completely except for the transfer of few staff from the sectors. Thus the CSO remained ineffective in discharging its new roles and responsibilities because of the fact that most sectors, on the one hand, had stopped all their statistical activities within their organization under the impression that their statistical responsibilities were handed over to the CSO whereas CSO on the other hand did not have resources to carry out all the responsibilities that were envisaged in the proposal. This sort of a situation led a system where data gaps and delays in publications still persisted. The CSO was left with a huge responsibility to cater to the needs of all sectors without much coordination from the sectors. In view of this, the Royal Government again initiated an effort to revitalize the national statistical system. A technical assistance (TA/BHU/8260) under the ADB provided the assistance to review the statistical system, particularly the structure, roles and responsibilities of the CSO. The project identified the following problems in the BSS –

- i) Lack of a mandate for the CSO as the national Statistical Coordinating Body
- ii) Lack of coordination with the sectors
- iii) Lack of National Statistical Legislation

To address the situation, National Statistical Workshops were conducted. The workshop proposed the organizational structure for the CSO, its roles and responsibilities. The main recommendation for CSO is to reorganize the seven existing units in CSO (Demographic and social Statistics Unit, National Accounts Unit, Foreign Trade Statistics Unit, Consumer Price Index Unit, Agricultural Statistics Unit, Sample Survey & Data processing Unit, Industrial unit) into the following three sections;

- i) National Accounts and Consumer Price Index Section
- ii) Coordination and Information Section
- iii) Survey Methods and Data Processing Section

The main objectives were to redefine the roles and responsibilities of the CSO to adapt to the needs of the time. It was also aimed at drafting the mandate of the CSO so as to achieve closer coordination with the sectors so as to strengthen the national statistical system. The proposal was developed through meetings and workshops attended by representatives from various sectors. The workshops recommended the responsibilities of the CSO as given below:

- 1) Standardization of concepts and definitions – Ministries and agencies may launch their sector specific surveys but in close consultation with the CSO to ensure that the concepts, definitions and classifications are uniform for national and international comparison
- 2) Coordination – For establishment of a reliable data base, coordination among the agencies is important. That will set on track the momentum to towards achieving a common goal

- 3) Provision of technical support – Since CSO is the national apex body in statistics, it should be the responsibility to provide the technical support to the sectors in planning and designing of surveys, sample selection and matters relating to data processing.
- 4) Validation and authentication of estimates generated in the statistical systems

The proposed roles of the CSO were the following:

- 1) CSO to be the central agency dealing with macro-economic data
- 2) It should be involved in compiling the data and carry out necessary analysis and interpretation of data
- 3) To publish regular publication on time
- 4) As the national apex body, coordinate all statistical activities
- 5) Provide technical backup to other sectors
- 6) It should ensure uniform concepts, definitions and classifications for comparability

Further in 2003, with the restructuring of the government the CSO was granted the autonomous status and renamed as the “National Statistics Bureau” (NSB). The NSB now had its own budget provisions, sufficient equipment except transport, and enough stationery and improved manpower to carry out its responsibilities. The NSB was guided by the National Statistical Board whose members are drawn from the line ministries. The National Statistical Board was chaired by Chair persons who were a Cabinet Minister. Under the new arrangements, the NSB reports directly to the Prime Minister.

The NSB now operates through five Divisions mentioned below:-

- 1) National Accounts & Price Division
- 2) Coordination and Information Division
- 3) Survey/Census and Data Processing Division
- 4) Socio-economic Analysis and Research Division
- 5) Administrative and Finance Division

However, there still need a coordinated framework of statistical development in terms of data gaps, duplications, professionalism, coordination, data accessibility, and dissemination issues.

Therefore, the development of the NSDS system for Bhutan Statistical System is another milestone for Bhutan to achieve the expected standard of statistics for the betterment and enhanced development.

3.2 Legal and institutional environment

The BSS organisation and activities currently relies on several legal orders, instructions and mandates. These orders contain some statements dealing with the responsibility for collecting, processing, and disseminating the statistics, data sharing among statistical agencies and confidentiality. But no Statistical Act has been yet promulgated which should define activities and responsibilities of the BSS members, give them legal authority to undertake their assigned activities, organise statistical coordination and guarantee the confidentiality of the information provided by the respondents. A draft Act has been prepared with the support of Asian Development Bank (ADB). It mainly relies on the Principle of Official Statistics, the current best practices as regard the organisation of national statistical systems and Bhutan legal and administrative framework.

The statistical system in Bhutan is decentralised. It involves most of the ministries and several agencies, which collect, compile and disseminate statistics related to their own field and for their own analytical and policy needs. In most Ministries the PPD is undertaking or coordinating the statistical data production and dissemination. The RMA has a specific mandate to produce monetary statistics and to compile the balance of payments. The Ministry of Finance (MoF) has also a mandate for compiling and disseminating fiscal statistics.

A Government Order of October 2003 established the NSB as the main coordinating statistical agency in the country, with an autonomous status and its own budget. The NSB has also the responsibility of producing fundamental statistics: national accounts, price statistics, poverty statistics etc. It disseminates publications: general publications presenting the main data in all statistical areas (“Statistical Yearbook”, “Bhutan at a glance”) and publications dedicated to its own production.

However, due to a lack of human resources, the Socio-economic and Research Division has not yet been fully established partly because of the lack of qualified and experienced staff and currently remains as a part of the Coordination and Information Division. Population, Housing and GIS Division is proposed as a new division after the transfer of the responsibility of the PHCB along with the database, GIS and census questionnaires from the Census Commissioner’s Office in mid 2006.

The NSB has posted a DSO in each Dzongkhag who is responsible for assisting the field operations and data collection conducted by the NSB and disseminating data as well as provides support to the Dzongkhag officers in charge of data collection for other line Ministries (Ministry of Agriculture and Ministry of Health etc.). DSO answers to the requests of the data users. As a Dzongkhag official, the DSO is working under the supervision of the Dzongdag (Administrator) who also entrusts to him many other tasks. At certain times, statistical duties are not the priority tasks that the DSO has to undertake. DSOs met estimate that only half of their working time is strictly dedicated to statistical activities. Mandate and function of the DSO need to be strengthened and re-defined

3.3 Coordination mechanisms: existing situation

The NSB has mandate to coordinate the statistical system. An Executive Order of the Prime Minister dated May 2006 has reaffirmed that the NSB is the “central authority for collection and release of any official data, and their custodian. As such all ministries, departments and agencies are directed to acquire prior approval from the NSB on all statistical matters”. Currently there is no official discussion forum for the BSS partners. And this order is interpreted by some of them as an attempt from NSB to rule the BSS.

NSB coordination activities are limited: the NSB collects data from the line Ministries and agencies to prepare the general publications and update the BhutanInfo database. It also provides some support to the other BSS data producers to carry out surveys: households sample selection, questionnaire preparation, data checking and processing.

Most of the NSB partners belonging to the BSS are expecting a stronger support from NSB in various areas, mainly:

- Methodology: sample surveys, census
- Human resource: staff and training
- Data dissemination: easy access to all the data produced by the BSS.

Some line ministries have set up coordination mechanism with their partners for specific statistical operations. The Health Information System Board meets once a year; and gathers all the producers of information on health. The NSB is a member of the Board.

3.4 Assurances of integrity: principles

The Fundamental Principles of Official Statistics are the reference framework for the statistical activities in Bhutan. These references are underlying the draft statistical Act and the NSB’s values. Some of these principles are generally recalled during the staff training and in the enumerators’ user guides.

But the users are not informed the BSS is adhering to the principles and of objectivity in the collection, processing, and dissemination of statistics.

3.5 Resources

3.5.1 Human resources

The BSS has a limited number of staff to carry out its statistical tasks and among this staff only a small part has a qualification in statistics (diploma, degree or master).

The overall number of statistical staff working in the BSS is around eighty five of which sixty two persons are currently working in the NSB. Of them, twenty are posted in the Dzongkhags as Dzongkhag Statistical Officers. Only a few staff, i.e. around 1 to 3 staffs are carrying out the statistical tasks in the PPD of each line ministries and agencies. Of all the BSS staff taken together, the number of technical staff with at least a degree level in statistics will be around 20 by the end of the year.

The NSB has requested 2 statistical officers for the National Accounts Division, plus seven staff for the Population and Housing Division (to be established). But the chances of fulfilling this request before the end of the implementation of the 10th FYP in June 2008 is quite slim owing to the government “zero growth” policy on human resources..

The Royal Civil Service Commission (RCSC) is in charge of the recruitment and training of the staff for all the Ministries and agencies. Statisticians with a degree or a master in statistics are considered as technical staff, which offers them a better carrier starting level. But the RCSC has a lot of difficulties to recruit them as few people are available with such a qualification. That is the reason why the NSB has currently several vacant positions. The recruitment of economists during the last years is not fully satisfactory as they have not the expected technical skills.

The RCSC has agreed that each ministry (except the Foreign Ministry) should have at least one statistician (degree or master level) by the end of 2009. This objective will be met thanks to the fellowships, which have been offered during the last years.

All DSOs have been trained at the diploma level in statistics for training periods ranging from 10-12 months in India, Japan or other UN designated International Institutes.).

Some stakeholders of the BSS have expressed their concern and apprehension over the lack of career options and cadre migration of professionals including the statisticians within the civil service which would promote the statisticians to leave their current job services due to the lack of career evolution.

3.5.2 Technical resources:

IT hardware and software

The BSS statistics producers and the DSOs are generally equipped with the needed number of basic hardware equipments: computers, printers, scanners, and plotters. The computers are most of the time connected to the local area network of the Ministry or Agency.

The NSB has a local area network with a Dell sever ensuring data sharing among the users and access to the internet. The security of the server data is relying on the use of hard disk drives with RAID 5 technology. However, to provide a complete data security solution, the data stored on the server should also be copied on external supports stored outside the server room. The security of the data stored on the personal computers is one’s own responsibility of the user. The local area network is protected by a CISCO firewall. The antivirus software is Norton, on the server and the standalone computers.

Software packages mostly used by the BSS for statistical data processing are the following: Microsoft Office, CSPRO, SPSS, STATA and Eviews. Database management software available are Access,

SQLServer and MySQL. However, for all these software, the number of official licences is often lower than the number of users.

In the NSB, the three staff working in the IT section provides support to the users.

Every Ministry and Agency has its own internet site. It is used, besides others for statistical purposes to disseminate data (See paragraph 6). The NSB IT staff is responsible for managing and updating the NSB website.

Neither the NSB nor the statistical sections in Ministries and other agencies have set up an archiving system relying on electronic data storage in order to secure all the documents, data and results produced in the framework of the censuses and surveys.

Use of Geographic Information System (GIS) software.

GIS is used within the BSS as a statistical tool to store GIS data and disseminating statistical data by some Ministries and agencies viz; the NSB, Ministry of Agriculture, Ministry of Health, Ministry of Education etc. A national coordination body responsible for all the GIS users and activities has been set up in 2005. A unit within the department of Survey and Land records of the Ministry of Agriculture, called the Centre for GIS Coordination has been created. It is the national focal agency for GIS. A national level GIS coordination committee called the National GIS Coordination Committee with representatives from all major stakeholders in the country has been formed. But this committee has rarely made much impact in consolidating and organizing the development of the GIS system during the past few years.

The PHCB has made an intense use of GIS during the census mapping of the country while developing the census maps, enumeration maps, and in presenting the results of the population census through population maps. A complete record of GPIS was carried out for the whole country, by taking coordinate position for every structure and boundaries of enumeration areas. This helped to produce enumeration areas maps that were given to the enumerators during census field operation. All the hardware, software and data have been handed over to the NSB at the end of the PHCB. Software used are the ESRI products (Arcview, ArcInfo et ArcGis). After the census, administrative boundaries have been changed and re-defined within some Dzongkhags, Gewogs and villages to adjust and re-locate certain areas to ease administrative operational accessibility of areas. Changes in boundaries have been partly incorporated in the original PHCB and GIS Database accordingly. Pilot projects are currently being carried out by the NSB for depicting and presenting GIS data for the Ministries of Health and Education. This project will test the feasibility and benefits of presenting social statistics with GIS as a tool to display statistics at the Dzongkhag and Gewog levels..

Other technical resources

All offices providing statistical services within the BSS generally have appropriate infrastructure and office space facilities. The NSB occupies a building with sufficient office spaces in the North of Thimphu surrounded by a vast area of open space and no other large structures beside it. There is enough parking space enough for visiting cars during its official meetings and visitors.

The NSB has a pool of trained persons to do desktop printing. Some of its smaller volume publications are designed and published within the office whereas larger volumes and important publications are often outsourced to the local printers and publishers.

Main transport system used in Bhutan is road transport. Whenever a survey or a census is undertaken, vehicles are the main logistic resources needed, for which a large amount of expenses is incurred. NSB does not own a permanent pool of vehicles. The NSB hire vehicles to conduct field operation during major statistical surveys or a census.

3.5.3 **Financial resources**

The NSB has its own budget, while the respective ministries have their own budget dedicated to statistical activities which is included in the PPD budget or in the departments' managing administrations.

The NSB's annual budget is around 23 millions Ngultrum, excluding training and travel expenses. Some donors provide financial support to carry out certain statistical activities (see paragraph 3.5.4).

The DSOs' activities are funded by the Dzongkhag budget while sector statistical activities e.g. the agriculture, education, health sectors etc. have slated budget line. Absence of a separate budget for for dzongkhag statistical activities is one of the reasons why DSOs may face difficulties to collect the required data. They have to, for each quarter make a budget request for the CPI data collection; unavailability or delayed budget provisions have led to the delay in collection and delivery of data to the NSB.

3.5.4 **Technical assistance and other supports**

The BSS is currently receiving support to statistical activities from several international organisations and cooperation agencies.

BSS service	Donor	Statistical activity supported	Kind of support
Agriculture	JICA		
	FAO		
	DANIDA	RNR Census 2009	Funding
Education	UNICEF	EMIS	
	DANIDA		
Health	DANIDA	HMIS	
Labour and Human resources	GTZ	LMIS	Technical assistance
NSB	World Bank	NSDS and poverty analysis	Funding, Technical assistance
	UNICEF	Population projections/ BhutanInfo	Funding, Technical assistance
	UN agencies	Bhutan Info website and printing, training for officers and users	Funding, training, workshops
	UN Agencies	Updating of Dzongkhag GIS on planning and service delivery points through data collection in 12 selected Dzongkhags	Data collection and GIS

The NSB has also received support in the past from ADB, JAICA, UNDP and UNFPA.

3.6 **The BSS and the decentralisation process**

As a result of the decentralisation process there is an increasing need of local data, mainly at Dzongkhag and Gewog levels. The DSOs have a key role to gather the existing data at those levels. They prepare the annual “*Dzongkhag profiles*”. Due to the lack of human resources in the Dzongkhag, they are often asked by the Dzongkhag to carry out a lot of tasks beyond the scope of statistics.

Some line Ministries (Agriculture, Health) have also representatives at Dzongkhag level who collect data for their own needs. The DSO sometimes provides support as there is no other staff with the required statistical skills. But it seems that there is some confusion between the DSO's role and the

role of the sector data manager. Even in line Ministries there is a low knowledge of the services the DSOs can provide.

The BSS should improve the coordination between the statistical activities and make a better use of the existing statistical skills.

4 The statistical infrastructure

4.1 Classifications

International classifications are the reference classifications for the statistical activities in Bhutan. However the classification version or revision used is not always the most up-to-date.

International classifications used in Bhutan

Type of classification	Name of the classification	Last version available	Version used in Bhutan (user)
Economic activity classifications	International Standard Industrial Classification of All Economic Activities (ISIC)	Rev. 4	Rev.3 (NSB, MoLHR)
Product classification	Central Product Classification (CPC)	Ver. 1.1	
	Harmonized Commodity Description and Coding System (HS)	HS96	(DRC)
	Standard International Trade Classification, Revision 3 (SITC,)	Rev.3	
Expenditure according to purpose classification	Classification of Individual Consumption According to Purpose (COICOP)	2000	2000 (NSB)
Employment, occupation or education classification	International Classification of Status in Employment (ICSE-93)	1993	1993 (NSB, MoLHR)
	International Standard Classification of Occupations (ISCO-88)	1988	1988 (NSB, MoLHR)
	International Standard Classification of Education 1997 (ISCED 1997)	1997	
Social or Health classification	International Statistical Classification of Diseases and Related Health Problems (ICD-10)	1989	1989 (MoH)
Country and area classification	Standard Country or Area Codes for Statistical Use, Revision 4 (M 49)	Rev. 4	
Other classification	Balance of Payments Manual (BPM5)	1993	1993 (RMA)
	Government Finance Statistics (GFS)	1986	1986 (MoF)

A complete set of geographic codes available for the different administrative levels has been defined for the census. It is now the geographic coding system used by the NSB. The same coding system is not used by all the other statistical services. For example, the Ministry of Agriculture has its own geographic coding system developed in the framework of a DANIDA support project; the Department of Revenue and Customs (DRC) has also its own system. One of the objectives of the agency coordinating the GIS is to develop a unified coding system.

4.2 Concepts and definitions

The use of common concepts and definition by all the BSS data production processes is a way to improve the consistency of data. This wish is shared by all the BSS partners. However there is currently a lack of common definition of the basic concepts, mainly

- Household.
- Urban/rural areas
- Corporation and establishment

4.3 Registers and sample frames

The list of households and enumeration areas established during the last census has been used as sample frame for the households surveys carried out since 2005. The list of the households in the selected enumeration areas is generally updated before launching the survey, especially in the urban areas. But these updates are not included in the sample frame.

There is currently no unique business register, which could be used as sample frame for business survey purposes. Departments are managing a business register for their own use. DRC maintains their own registers, one for custom purpose and another for tax records. The Ministry of Economic Affairs (MoEA) has a register of trade licences awarded to corporations and individuals and a register of business and service licences. The data base management system developed by the NSB to manage the licences is no more operational. However, the Government policy is to suppress the licences. The Ministry of Labour and Human Resources (MoLHR) has carried out in 2007 a census of the establishments based on the MoEA register of licences.

The civil register is managed by the Ministry of Home and Cultural Affairs (MoHCA) although that has not yet been used for analysis and to produce any vital statistic or as sample frame.

5 Data production

5.1 Demographic and social statistics

5.1.1 Population statistics

The main source of population statistics is the PHCB undertaken in 2005. The publication of the results of the census has put an end to the long period of lack of reliable population data: the Bhutan population estimations ranged between 500 000 and more than 2 millions. The results of the census are now set as the baseline reference for the population studies and projections exercises that followed the census.

Methodology

The Population and Housing Census of Bhutan 2005 is the first ever census conducted in accordance with the UN recommendations. An executive order issued by the government authorized the Office of the Census Commissioner (OCC) to conduct the Population and Housing Census of Bhutan 2005 with the approval from His Majesty the King and due endorsement by the 82nd session of the National Assembly.

An independent office responsible for the conduct of the census was created by pooling staff from various Ministries/Agencies of various professional background in demography, statistics, cartography, surveys, communication professionals and senior staff from various Ministries/Agencies. The office of the Census Commissioner received administrative, policy and overall guidance from the National Census Committee whose members were the Ministers and Secretary level staff. The Population Census Technical Committee was chaired by the Census Commissioner provided technical and strategic planning and implementation of the census.

Sub-committees were also formed in each Dzongkhag and Gewog levels, with the Dzongda as the Chair Persons to ensure good planning, execution and full coverage.

Before the actual census, pre-census activities involving the preparation of census maps, delineation of enumeration areas, listing of structures, census houses and the list of households were extensively carried out. For listing and mapping operation, GIS hand held GPS readings were taken for each standing structure. This was mainly to identify and locate a household during the census enumeration.

The census enumeration was conducted for two days i.e. 30 and 31 May 2005. A total of 7,500 enumerators, supervisors and administrators were involved throughout the country during the census enumeration. Enumerators conducted face to face interview by visiting households and collected information in a structured questionnaires. Before census enumeration, several rounds of trainings for enumerators, training of trainers, census administrators, local officials were undertaken. Census enumerators were drawn from several Ministries/Agencies who were volunteers, school teachers, RNR extension workers, Health workers, NFE instructors, students from Sherubtse College, National Institute of Education, Natural Resource Training Institute, Royal Bhutan Institute of Technology, Royal Institute of Management.

Method of enumeration was based on the de facto principles of enumeration. Under this method, all persons physically found in an area on 00.00 hours of 30 May 2005, regardless of their nationality and usual place of residence were enumerated. Transient population or population on the move during census time were enumerated in the places where they were found on census day.

Data quality control measures were introduced right from the preparation phases, at the field enumeration stage, clerical checking of completed forms at the Dzongkhag level as well as at the headquarter before data entry. The first data checks of forms were done by the field supervisors and

then followed by the Dzongkhag level editing immediately after field operation. The completed forms were then transmitted to headquarter in Thimphu, where the forms were checked for another time. The data was then entered into the computer by 60 data keyers, supervisors and assistants for duration of 6 months. To ensure completeness of quality, 100 % verification of the data was undertaken.

The Population and Census covered the entire country, consisting Dzongkhags, Gewogs, Chiwogs, villages and all the towns. The census covered all individuals irrespective of nationality residing in regular households, institutions, temporary huts and also the transient population

Scope of data produced

The census mainly collected information on demographics and general characteristics, births and deaths, migration, education and health, employment and other household characteristics i.e. on ownership of housing, lighting, cooking fuel, toilet facility, source of drinking water, accessibility to road network etc.

Publications

The main publications produced as post-censal activity are the following:

- 1) Results of Population and Housing Census of Bhutan 2005
- 2) Census Results Atlas
- 3) Population Fact Sheet
- 4) Wall Chart on PHCB 2005 results
- 5) Population Projections 2006-2030
- 6) Dzongkhag Population Profile
- 7) Dzongkhag Population Projections 2005-2030

No post-census survey has been carried out, due to the lack of resources. Nevertheless the census results are considered of meeting the acceptable standard quality through various quality assurance measures employed during various phases of the Census.

Besides the results from the population census, demographic statistics have also been produced in 2007 from the Bhutan Living Standard Survey (BLSS) carried out in 2007.

An inter-census population survey is planned for 2010. The objectives of the survey, the list of data to be collected etc. are yet to be defined and identified.

The MoHCA is in charge of managing the civil registration of all citizens and special residence permit holders and producing vital statistics. Data are released yearly but they do not cover the entire population.

5.1.2 Health

The Bhutan Health Management Information System (BHMIS) provides information on the healthcare system and the health status of the population. The BHMIS contains the results of the compilation of administrative data collected on a monthly basis at different levels: hospitals, Basic Health Units (BHU) and Outreach Clinics (ORC). In each health facility, one person is responsible for filling in the forms on the basis of several registers. Forms are submitted to the focal person of BHMIS who compiles them and transmits them before the 15th day of the following month to the DHSO (District Health Supervisory Officer). The DHSO enters the data into BHMIS software and generates a compiled quarterly district report. The data file is send to the Health PPD at the latest by the middle of the second month of the quarter following the reference quarter. Each facility receives its own quarterly report and the district report. ORC activity is reported within the Hospital/BHU whose it is an extension. In-service training has been organised to train the local staff in charge of completing the forms and the DHSO compiling the quarterly reports. The classification of diseases used is the International Classification of Diseases (Rev 10).

The results are published yearly in the “*Annual Health Bulletin*” and the publication is available on the internet site of the Ministry of Health (MoH). The 2007 Health Bulletin, available at the end of 2007, gives the figures for 2006.

The health surveys supplement administrative data by providing information on maternal and child health status and access to basic services (water and sanitation). The first nation wide health survey was carried out in 1984, the second in 1994. The last survey was carried out in March-April 2000 and the next one is planned for 2010. A stratified two-stage sampling was adopted for the survey in 2000 (primary strata: urban/rural; secondary: blocks in urban strata and Gewogs for rural areas). The sample contained 13 000 households. The survey has delivered some demographic indicators rather consistent with those of the 2005 PHCB.

Comparative Demographic Indicators

Indicator of National Health Survey	Number rate			
	1984	1994	2000	2005*
Life Expectancy at birth (Years)	N.A	66.1	66.1	NA
Sex ratio (males per 100 females)	103	105.1	106.6	111
Dependency ratio	80	91.7	74.4	60.6
General Fertility Rate	170	172.7	142.7	NA
Total Fertility Rate	N.A	5.6	4.7	NA
Crude Birth Rate (per 1000 population)	39	39.9	34.1	20.0
Crude Death Rate (per 1000 population)	13	9.0	8.9	7.0
Population Growth Rate	3	3.1	2.5	1.3
Infant Mortality Rate (per 1000 live births)	103	70.7	60.5	40.1
Under 5 mortality Rate (per 1000 live births)	162	96.9	84.0	61.5
Maternal Mortality ratio (per 100,000 live births)	770	380.0	255.0	NA
Trained Birth Attendance (%)	NA	10.9	23.6	49.1

*Population & Housing Census 2005

Source: Annual Health Bulletin 2006

**Health Information Unit
Planning & Policy Division
Ministry of Health
Thimphu : Bhutan**

No information on nutrition is currently produced by the MoH, neither by the MoA, both considering this aspect as being out of domain of their sector’s responsibilities. The lack of data on this specific topic prevents from reliably assessing the MDG target 2 (“to halve that proportion of people who suffer from hunger by 2015”).

5.1.3 Education

The Education Management Information System (EMIS) is the primary data source on education managed by the Ministry of Education. Data are collected yearly on paper forms for each school and cover: pupils (per age, sex, class, and other individual information), teachers, school facilities, school feeding (World Food Program) and non-formal, continuing and special education. The schools covered are: public schools, private primary schools, private secondary schools. These data are aggregated per section by school.

The EMIS also receives data from the Royal University of Bhutan. The fellowship management system and the Bhutanese student associations provide information about the population studying abroad. An agreement with the Monastic education enables to get information about the pupils enrolled in that system.

A lot of data collected is not used. The comparison of the data produced with other source (Census and BLSS) has shown consistent results for primary, secondary and monastic education. Quality of the data on non formal education is weak.

The EMIS also contains data coming from four other sources:

- Class X and Class XII examination results produced by the Bhutan Board of Examination.
- Geographic information from GIS
- PHCB data
- Financial data produced by the MoF.

The mains results are published annually in a publication, which is also available on the MoE internet site. Since 1999, further data are available on CD-Rom (pdf file and Excel sheets). 1250 copies of the publication were printed.

The Ministry of Education (MoE) has no structural communication with the Dzongkhags. However each Dzongkhag receives a copy of the forms collected in the schools by the Ministry. The school budgets are managed at that level.

Developments are under way to prepare the automation of the EMIS. The implementation of the new system will start in 2008. Communication officers posted in the Dzongkhag will enter some data in the new system.

5.1.4 Labour statistics

The Labour Force Survey (LFS), conducted annually, is the main source of information for labour statistics besides those statistics available from the population census. A series of five surveys have been carried out since 1998: in 1998, 2001, 2003, 2004, the last one in 2006. A stratified two-stage sampling was adopted for the survey (primary strata: urban/rural; secondary: blocks in urban strata and Gewogs for rural areas). The sample contained around 8 000 households. From 2006, the sample frame used is based on the PHCB managed by the NSB. The survey provides the following information:

- socio-demographic characteristics of the population
- information on the labour force into the labour market
- nature of work the rural and the urban people are involved in
- economically active youths aged 15-24
- income level and minimum level of income of the population by employment status
- skills obtained as a result of VTI trainings and
- nature of unemployment etc.

No survey has been carried out in 2007 and the MoLHR satisfies the information needs by using the data collected by the BLSS 2007.

The reliability of the LFS data is an issue to consider. The quality of the data published does not reach the level expected for policymaking. Some results are not consistent with those produced by other sources (for example with PHCB2005: population per sector of employment, employment status). Data inside one survey are not always consistent (example LFS 2006, tables 16 and 17). And variations presented in times series show also some inconsistencies between the yearly results: employment rates for example.

The Department of Employment intends to carry out this survey on a quarterly basis during the implementation of the 10th FYP to capture the seasonality of labour and economic information. However the feasibility study carried out by the International Labour Organisation (ILO) has reported a negatively because of the lack of capacity in the MoLHR to carry out the analysis. Considering the largest share of labour force in agriculture, the future LFS surveys must focus on other economic

activities to accurately reflect the economic and labour force situation in sectors other than agriculture.

The MoLHR has also set up a Labour Management Information System (LMIS) which contains information collected from many sources mainly the Labour Force Surveys, Population & Housing Census of Bhutan 2005 (PHCB2005), statistical reports obtained from the MoE, the RCSC and the Royal University of Bhutan. A “*Labour Market Information Bulletin*” is published bi-annually. The lack of skills to carry out analysis and to select the relevant and reliable figures greatly impacts the quality of the bulletin.

Besides the Labour Force Surveys, establishment censuses have been carried out in 2002, 2006 and 2007. Information gathered is used to compile wage data in the private sector.

The MoLHR looks up to the NSDS as a strategy that should enhance the coordination between the BSS data producers in order to set up common data base, streamline collection procedures, setting timelines and provide a statistical environment that enables the exchange and accessibility of data especially with the RCSC and the MoE.

5.1.5 Income and living conditions

The NSB carried out the first Household Income and Expenditure Survey (HIES) in 2000. This pilot survey has been followed by the Bhutan Living Standard Survey (BLSS) in 2003 and BLSS 2007. The BLSS followed the Living Standards Measurement Study (LSMS) methodology developed by the World Bank.

Based on the unsatisfactory income data as evidenced from the HIES 2000, the BLSS 2003 survey was designed to collect only consumption expenditure from the household to assess people’s well-being and to construct comprehensive poverty profile for the country. The BLSS also collected information on housing, employment, health status, fertility, education, access to public facilities, assets ownership, accompanied by a community questionnaire aimed at collecting information on service provision and prices of commodities. The NSB released the “*Poverty Analysis Report 2004*” which used the BLSS 2003 data. The analysis of the welfare conditions are based on the per capita household consumption expenditure.

The BLSS 2007 uses a sampling frame based on the results of the PHCB 2005. To improve the reliability of data estimates, the size of the sample was increased from 4 120 households in 2003 to 10 000 in 2007. Some changes to the BLSS 2007 questionnaire (list of food items, reference periods) since 2003 may influence the comparability of the results of BLSS 2007 and BLSS 2003. The “*Poverty Analysis Report 2007*” has been based on the BLSS 2007. It presents poverty levels and patterns right down to the Dzongkhag level. It establishes a new reference base line for poverty.

5.2 Macro economic statistics

5.2.1 National accounts

The NSB produce since 1987 an annual report on “*National Accounts Statistics of Bhutan*”. The 2007 report contains a range of national accounts tables for the years 2000 - 2006:

- Gross and Net Domestic Product (GDP, GNP) and related macro-economic aggregates at current and constant prices.
- GDP by kind of activity at current and constant prices.
- GDP by kind of use (consumption, capital formation and net exports) at current and constants prices.

The base year for the national accounts statistics is 2000 and the compilation is based on the System of National Accounts (SNA) 1993 methodology. The full sequence of SNA 93 is yet to be adopted when reliable input data becomes available. The expenditure approach is used to estimate the GDP because there are discrepancies with the GDP estimate based on the production approach. The production approach of GDP estimation normally results to over-estimation or an estimate higher than expenditure approach. In the process of refinement and improving the quality of GDP estimate, the NAS Division has yet to prepare supply and use table.

The national accounts and GDP statistics compilation mainly relies for input data from survey, administrative data collected by line ministries and small case studies.

Component	Survey name or administrative sources	Owner	Frequency	Last period	Remarks
Private consumption	HIES 2000 BLSS 2003 BLSS 2007	NSB	3 years	2003	HIES used as benchmark
Industry production	Profit and loss accounts of the 20 main companies		Year	2006	Tax sources not reliable. No business survey
Informal sector production	HIES 2000	NSB		2000	Proxy for informal sector (10 to 15% of total production)
Electricity		Department of Energy, MoEA	Monthly	2006	
Mines, Careers		Department of Geology and Mines, MoEA	Yearly	2006	
Agriculture – Crop production	Census 2000 Survey 2003	MoA		2003	Census 2000 as benchmark Use population growth rate for estimation
Agriculture Livestock	- Census 2000	MoA		2000	
Forestry	Forestry Development Corporation.	Forestry Development Corporation			Coverage : more than 80%
Construction	No reliable information				Small companies have no accounts
Retail trade	Tax	DRC	yearly	2006	
External trade	Customs	DRC	yearly	2006	
Administration consumption	Annual budget documents	MoF	yearly		

The construction sector, which represents the second largest share in overall GDP, is the most critical part as there is only few data for building production estimates. Data on agriculture and its estimates are also weak, requiring current and up-dated data. The estimates have to depend mainly on out-dated data of past surveys and the unreliable administrative data. The situation might be improved if a

systematic and reliable Household Expenditure Survey could be conducted every 5 years which would yield accurate consumption expenditure data.

It is assumed that a lot of information necessary for the GDP estimates are existing within other agencies that are not easily accessible at the moment. The NSDS must provide a platform for communication and dialogue among these agencies to make these data accessible. .

The first preliminary estimates are published and made available 6 months after the end of the reference year. Final estimates are then published one year after the preliminaries are disseminated.

The NSB and the MoF both prepare and bring out the GDP projections and the resulting estimations differ. The users express that the projections should be done by only one relevant agency to avert the state of conflicting figures and confusions among the users. The users desire that the length of projection be not limited to just a few years into the future but to have at least more than five years and beyond.

5.2.2 Price statistics

The NSB compiles a quarterly Consumer Price Index (CPI) for the 23 urban areas of the country. The weights and the basket of commodities and services are constructed from the BLSS 2003. There are 363 products in the basket and 2003 is the reference year. No update of the weights and the basket has been made since that date.

The International Monetary Fund (IMF) methodology is the reference methodology and the COICOP is the classification used. The index is computed using the Laspeyres methodology to develop the CPI index, which is based on average prices of commodities.

Food commodities prices are collected monthly (1st Saturday of the month) and non food products are collected quarterly (first week of the second month). The data are collected by the DSOs and transmitted electronically to the NSB for further compilation, data editing, and constructing the indices.

The “*Quarterly Consumer Price Index Bulletin*” is available in the middle of the quarter following the reference quarter. Upon request, the published results are also delivered in soft copy in Microsoft Excel formats.

A quarterly production price index for manufacturing industries is under preparation.

5.2.3 Monetary statistics and Balance of Payments

Monetary and finance statistics are produced by the Royal Monetary Authority (RMA). Article 34 of the RMA Act empowers the RMA to collect information from every financial institution. The reference methodology is the Monetary and Financial Statistics Manual (MFSM) of the IMF.

Monetary statistics are published in the RMA’s “*Monthly Statistical Bulletin*” (last issue September 2007). The “*Selected Economic Indicators*” publication is released quarterly (last issue September 2007). It contains an overall description of the economic situation during the reference quarter and macro-economic and monetary statistics. The “*Annual Report*” reviews developments that have taken place in the Bhutanese economy during the fiscal year (last issue in January 2008 for the year 2006/07). Commentaries on the economic sectors are based on information provided by government authorities, financial institutions, and private sector sources. Comprehensive background data are

available in the statistical section, while the annex provides additional detailed and updated information on some of the economic sectors.

The RMA also compiles analyses and disseminates the Balance of Payments (BoP) statistics. The BoP statistics are compiled following the guidelines recommended in the Balance of Payments Manual, Fifth Edition (BMP5). Bhutan's BoP statistics are compiled and published on an annual, fiscal year (July-June) basis. Given the special geo-political ties as well as the volume of trade with India, the BoP statistics are compiled separately for India. The BoP for India and for countries other than India is aggregated to present the overall balance of payments of Bhutan. Final BoP statistics for the fiscal year "n/n+1" are published in the "Selected economic indicators" related to the third quarter of year n+2.

An IMF mission has provided support to the RMA in 2005 to design a standard survey form which is used to capture data for Bhutan's balance of payments. The RMA has carried out a survey on the informal trade (Imports and exports) with India and transfer of money by the foreign workers. It also carries out a quarterly survey on services since 2005 for the purpose of measuring the outcome of economic transactions of Bhutan with the rest of the world. Results will be published when data series will be available.

The RMA has noticed some inconsistencies between the external trade statistics and the monetary statistics when preparing the BoP for the last year. It suspects some omission in the figures related to the imports of goods from India recorded by the Department of Revenue and Customs (DRC).

5.2.4 Government finance statistics

The Government finance statistics are compiled by the Ministry of Finance, Department of Budget and Accounts and Department of Aid and Debt Management.

The concepts and definitions, scope, classification and basis of recording used to compile budget execution data are contained mainly in the Financial Management Manual, the Budget Manual, the Revenue Manual and Financial and Accounting Manual. They generally follow the guidelines of the Government Finance Statistics Manual (GFSM) 1986.

The MoF publishes four documents with budget data: "*National Budget*", "*Budget Summary*", "*Annual Financial Statement*" and "*National Revenue Report*". Only the last one is currently available on internet (last issue 2005-2006). But all these data are available on an annual basis although there is some time lag. The MoF also provides fiscal data for dissemination in the RMA publications.

5.3 Business statistics

5.3.1 Industry statistics

In Bhutan, the industrial sector has until recently played a relatively small role in the economy of the kingdom.

Existing statistical figures on industry cover mainly the number of enterprises by sectors (mining, manufacturing, wholesale and retail trade, and other service industries sectors). This information relies on the record of all industrial licenses and activities managed by the Ministry of Economic Affairs, Department of Trade. Besides, Censuses of Manufacturing Industries conducted at regular intervals (Industrial Census of 1998 and 2001) are the main source of information on Industries. This information is available in the NSB Statistical Year Book; the MoEA has no more regular publication since 1994.

Profit and loss accounts of the main 20 corporate companies are also used. Most of small companies are not registered by the MoEA; the only available information about them is provided by the taxation records collected by the DRC.

The Department of Geology and Mines provides data on the extraction of minerals on which royalties is levied on the mining companies..

5.3.2 Energy statistics

Electricity generation has comparatively become the single most significant sector contributing to the economy of Bhutan.

Energy statistics cover the production, consumption and sales of electricity. Data are produced on a monthly basis by the Department of Energy, MoEA. The NSB collects the data from MoEA for compilation that is then published in its annual publication of the “*Statistical Yearbook of Bhutan*”.

5.3.3 Transport statistics

The Ministry of Works and Human Settlement (MoWHS), Department of Roads produces data on Roads. The figures are available in the first Annual Bulletin published in 2006 by the Ministry.

The Ministry of Information and Communication (MoIC) collects and disseminates the statistics on transport - the number of vehicles, number of driving licences, number of accidents, number of passengers carried by air. These data have been disseminated in a report in 2007 (“Information, communications and transport sector in Bhutan: a special report”).

5.3.4 Tourism

The tourism industry has been an important source of hard currency to Bhutan since the country was first opened to tourism in 1974.

The main statistics of interest in the field of tourism relate to the characteristics of visitors and the details of existing tourist facilities, interest centres and visitor arrivals, where they come from, when they come and the purpose of their visit. The data are produced by the Department of Tourism, MoEA.

5.3.5 External trade statistics

The Bhutan Trade Statistics (BTS) are generated from the Bhutan Automated Custom System (BACS), a computerised system used to record the custom declarations. The custom declaration form is similar to the Custom declaration format sponsored by the World Customs Organisation (WCO). The BTS uses the Bhutan Trade Classification (BTC), an eight-digit level commodity classification and coding nomenclature based on the Harmonised System (HS) from 1983 with the 2002 amendments.

The BACS has been developed in 2002 by an Indian IT company. The main problem is the absence of centralised database: data entry is made by the 23 entry points in local databases. The databases are received from the checkpoint and finally merged at national level. The ease of conversion of the data files and appending various data from entry posts needs further improvements. Electricity trade figures are collected from the MoEA and added to the central database. The published figures are not updated to include illegal and informal trade.

The monthly report is checked manually by the person in charge of the production of the statistics. Errors are sent back to the respective regions. Provisional quarterly figures are sent to the RMA.

A publication is released annually based on the 60 reports. The production of the publication is not automated and all the figures have to be keyed in individually; as a result there might be errors introduced in the publication. Two kinds of data are published: the trade with India which represents 90% of the overall trade and is a matter of the free trade agreement between Bhutan and India, and the trade with other Third countries. The last publication currently available is the “*Bhutan Trade Statistics for the year 2005*”. The 2006 publication is on printing. The publication does not include any metadata. Only a portion or a part of the publication is available on the internet site of the DRC

The main of trade statistics produced by the DRC is the RMA that places concerns regarding the time lag or delay in publishing the report as well as the quality and reliability of the data in the publication. The DRC has not carried out mirror exercise with Indian data to identify the commodities which may be underestimated. This is a consequence of the lack of staff and of the methodological knowledge to carry out this kind of exercise.

5.4 Agriculture and environment statistics

The Ministry of Agriculture has an extensive coverage of information on crop production, livestock production, forestry, and prices although the figures might be often inconsistent. The current objective of the PPD is to streamline the data production in order to get rid of these shortcomings and produce one figure per subject that is reliable.

The last RNR census was conducted in 2000. The census results are published and disseminated that form a rich source of RNR related information base. Each year a 10% sample agriculture (land use and crop production) survey and livestock census (livestock population) are carried out.

The administrative data are collected in the framework of the planning implementation. Quarterly progress reports are prepared by the extension officers posted in the 205 Gewogs. These reports are compiled quarterly and forwarded to the headquarters by the extension officers in the dzongkhag. The PPD in Agriculture Ministry receives, compiles and disseminates the annual publication. His information does not meet the expected quality requirements; there is a lot of delays in reporting and finally in getting the aggregated (some cases with 2 years after the reference year). The information transmitted by the Gewogs is highly dependent on the assessment made by the Gewog extension officer who may want to record expected target data of planning process rather than the real or actual data. Given this situation, the PPD considers that a significant part of the information generated through this system is purely theoretical.

To assess the extent of migration, the MoA carried out migration survey in 2003. The results have been published in 2005.

The MoA also collects the prices of several consumer food products. But this information is available with delay: the last data available on internet are related to December 2007.

6 Data dissemination

6.1 Dissemination policy

Statistical data dissemination is managed by the respective producer of statistical data and the methods vary. The NSB has its own system of dissemination while the other producers operate within their own framework without consultation with NSB on the range and type of data, their consistency and reliability issues. This is the main cause for data duplication or conflicting data on the same topic. A data dissemination policy and guiding principles under the NSDS should easily resolve these issues.

In the absence of a Statistical Act, there is currently no formal rule to guarantee the confidentiality of data when disseminating the results. This aspect takes a specific importance in small countries like Bhutan, where the statistician has often to deal with small numbers. The producers and especially the NSB have adopted a practical approach to disseminate micro data. No micro data of the BLSS is disseminated and only samples of the census data are disseminated. No census micro data are disseminated below the geog level which automatically cover-up for the confidentiality of data and protection of the respondents' rights. A model of agreement with the users of micro data is used.

6.2 Dissemination practices

The list of statistical publications produced since 2000 is rather limited. Most of them contain the results of a specific census, survey, or of the yearly processing of administrative data sources. These publications contain tables, graphs with some descriptive analysis. For a few of the publication, certain amount of metadata is available. Beside these publications, a few synthesis publications are produced regularly: the NSB produces annually the "*Statistical Yearbook of Bhutan*" and the RMA "*Selected Economic Indicators*" and "*Annual report*". The two "*Poverty Analysis Reports*" (2004 and 2007) are quite different from the rest of the publication in the BSS in that they propose an explanatory in-depth analysis of the subject.

All the publications are available on hard copy, which is the popular means of disseminating results. The main publications are mostly printed in number of copies that range between 1 000 to 1 500 copies. The publication producers do not use any standard rule for layout or cover design and content tabulation standards. The NSB has defined layout for the "*Statistical Yearbook of Bhutan*". The printing quality of the publications is sometimes inadequate and varies from one producer to the other in quality of paper and print.

The Internet dissemination is considered to be the next important option as a medium for dissemination of statistical information. The most recent publications are available on the internet site of some producers. But it happens that some publications available on hardcopies are not available on the internet site. The interface of the producer's sites is not always user-friendly and the connection speed may make it difficult to download large publications. Statistics on the use of the internet to access to the statistical publications are rarely available.

Several producers consider that the NSB should be the focal point to manage a common system of data storage, disseminate data on internet. The Government internet site should necessarily provide and offer a platform for creating a centralised access to publish all statistics and publications and accessibility to the web pages with ease but most often, the capacities doesn't permit that and most of the hyperlinks with the statistical publications are currently de-linked or gets cut off in the middle..

The NSB has planed to develop a database, which should be used to disseminate data on internet. A first version of this database, BhutanInfo, is available. This database is using DevInfo v5.0 of the UNICEF. The database contains the 48 MDG indicators as well as the 10th FYP indicators and some sector indicator. It is also planed to include indicators for local levels and to disseminate the data via CD-ROMs.

The NSB has a library where the users can have access to most of the Bhutan statistical publications.

The common price policy shared by all the producers is the dissemination free of charge of all the publications, as it is currently done by all administrative bodies in Bhutan. A first set of publications is usually disseminated to all the Ministries and the main public bodies, and to the producer's partners (local partners, research centres, and media). Then all the users asking for the publication get it free of charge. The NSB is managing a database of all addressees of its recipients of its publications.

There is no institutionalised method of announcing publication dates in advance. Some institutions (NSB, RMA) have an established routine in terms of the periodicity and the approximate dates of publication of their statistical reports. When a new publication is available, there is generally no specific marketing strategic action to promote the publication beyond its free distribution and its availability on the internet site of the producer. The newspapers announce and publish some figures extracted from the most important recent publications they receive from the producers (quarterly CPI, BLSS reports, Poverty Analysis reports etc.). Donors, which have supported the production of a publication, usually give access to it through their internet site and sometimes make press releases.

7 Conclusions: Strengths and weaknesses of the BSS

The objectives of this assessment of the BSS are to identify the main issues that the NSDS should address and all the elements already in place upon which the BSS can build its future developments.

The BSS currently enjoys a favourable environment for its development. It receives support from its stakeholders in all the Ministries and from donors in order to provide the data needed to prepare, implement and monitor the government policies. There is an increasing awareness for statistics among the Bhutanese society and the unanimous agreement for the need of good statistics, reliable, accurate and timely data which is fundamental to providing a strong foundation for an evidence based planning process.

However statistics do not always provide good news to the society when they point out important issues. Some statisticians are wondering about the permanence of the acceptability of the data by the users and decision makers in this context. The BSS development comes within the scope of the government policy and especially the budget constraints. These constraints along with especially the zero-growth of the staff number may turn out to appear as an obstacle in the BSS future developments and in meeting user needs. An unbalanced funding of the data collection between national budget and donors is feared as it might increase the donors' pressure for specific data collection.

Beside its favourable environment, the BSS strength mainly relies on the success of some symbolic data collections events such as the 2005 PHCB, the BLSS 2003 and 2007 and the improvement in the range and quality of data produced by many administrative sources. This has been possible through the repeated efforts to improve the BSS by allocating sufficient amount of funding for statistical operation supported by the willing and highly motivated staff.

Nevertheless, further improvements of the BSS must bring about solutions to the issues that is currently existing. The assessment has identified four main issues:

- The lack of human resources: insufficient number of staff, lack of suitable skills for a majority of the statistical staff, and a great risk to lose the most qualified staff due to the limited careers opportunities offered.
- The absence of a legal framework for the statistical activities, which should empower the BSS to undertake its statistical activities, while guaranteeing the users with the professionalism of the staff and confidentiality of the data.
- Some data weaknesses: reliability of some data and regular coverage of the data scope in order to produce the indicators needed to implement and monitor the national and sector policies.
- The difficulties encountered by the users to access to the data: data scattered across several individual producer offices and disorganised in view of their dissemination; low level of understanding of the data due to a lack of analysis and metadata.

Above all, On top of these four main issues, the lack of coordination within the BSS is a cross-cutting issue which should be addressed. It has an important impact due to the size of the country. The improvement of coordination is a way to provide some efficient answers to these strategic issues.

Annexes

A-1 Statistical indicators required to monitor the 10th FYP.

A-2. List of the main censuses, surveys, and administrative sources used for the production of statistical data, since 2000

A-2. List of the statistical publications since 2000

A-3. List of people met during the BSS assessment

A-4. Reference documents and internet sites

A-1. STATISTICAL INDICATORS REQUIRED TO MONITOR THE 10TH FYP

Economic Growth
Average GDP growth rate
- Agriculture
- Non-agriculture
- Trade
- Industry
- Energy
Contribution to national revenue in %
- Trade
- Tourism
- Electricity
Ratio of National Savings/GDP (percent)
Ratio of Investment/GDP (percent)
Inflation (percent)
Annual growth in FDI
Living conditions
Population living below poverty line
Rural population living below poverty line
Annual rural household cash income
Employment
% of school leavers having access to Vocation Education and Training;
% of all village level skills demand in various trades including construction trades is addressed
% of employers finding that trainees can perform their jobs they are trained in
% of courses conducted in VTIs in line with the labour market demand
Number of job seekers kept engaged in some training activities;
Number of job seeker having established their own businesses;
% of private sector agencies complying with labour and employment Act provisions
Number of occupational accidents and diseases among workers
Number of Social welfare scheme for private employees established
% of skilled workers competence in priority trades/occupations tested and certified.
Education
Gross primary enrolment ratio
Net primary enrolment ratio
Primary School Completion Rate
Teacher Student Ratio (Primary)
Teacher Student Ratio(Secondary)
Gender Parity in Education (Girls for every 100 boys)
- Girl-Boy Ratio (Primary)
- Girl-Boy Ratio (Secondary)
- Girl-Boy Ratio (Higher Secondary)
- Girl-Boy Ratio (Tertiary)
National Literacy rate
Adult Literacy rate

Education
Gross primary enrolment ratio
Net primary enrolment ratio
Primary School Completion Rate
Teacher Student Ratio (Primary)
Teacher Student Ratio(Secondary)
Gender Parity in Education (Girls for every 100 boys)
- Girl-Boy Ratio (Primary)
- Girl-Boy Ratio (Secondary)
- Girl-Boy Ratio (Higher Secondary)
- Girl-Boy Ratio (Tertiary)
National Literacy rate
Adult Literacy rate
Health & Sanitation
Life Expectancy
Population Growth Rate
Infant Mortality Rate (per 1,000)
Under-five Mortality Rate (per 1,000)
Maternal Mortality Ratio (per 100,000)
Trained Birth Attendance (%)
Access to improved sanitation
Access to improved drinking water
Nutrition (Children)
% underweight
% stunted
% wasted
Human Development Index (HDI)
Major Physical Infrastructure
Hydro-power generation capacity
% of national population with access to electricity
% of rural population with access to electricity
Proportion of rural population living within Half a day"s walk from nearest road head
Proportion of population within three hours of a Basic Health Unit or ORC
Rural Telecommunications penetration rate
Access to ICT services
Establish a Cyber Park Establish Industrial Parks, Dry Port and Trade
Number of km of national highways
Number of national highway bridges
Number of KM of double-laning national highways
Number of km of national highways realigned
RNR
Number of farmers group established for Non Wood Forest Products production and commercialization
Value of horticultural export
% of farmers engaged in horticultural export cropping
% of rural population living within one hour"s walk from a road-head
% of farmers certified natural/organic producers
Number of Master Plans developed for main watersheds
% of forest area managed as community or private forestry
Trade
Value of total trade
exports value
Number of trading establishments
Tourism
Number of tourists arrivals
Employment growth of tourism sector

A-2. LIST OF THE MAIN CENSUSES, SURVEYS, AND ADMINISTRATIVE SOURCES USED FOR PRODUCTION OF STATISTICAL DATA SINCE 2000

Statistical domain	Survey name or administrative sources	Responsible
Population statistics	PHCB 2005	Census Commission
Health	BHMIS National Health Survey 2000	MoH
Education	EMIS	MoE
Labour	LFS 2001 LFS 2003 LFS 2004 LFS 2006 LMIS Establishments survey 2002 Establishments survey 2006 Establishments survey 2007	MoLHR
Income and living conditions	HIES 2000 BLSS 2003 BLSS 2007	NSB
Price statistics	CPI survey: quarterly	NSB
Monetary statistics	Balance sheet of the financial institutions: monthly (FIS-M1M2) Balance of Payments Survey: quarterly	RMA
Government finance statistics	Budget execution	MoF
Industry	Industrial licences register Trade licenses register Census of Manufacturing Industries 2001 Profit and loss accounts of the 20 main companies Tax	MoEA DRC
Electricity	Production, consumption and sales of electricity	Department of Energy, MoEA
Mines, Careers		Department of Geology and Mines, MoEA
Transport	Roads Vehicles Driving licences Accidents Air passengers	MoWHS MoIC
Tourism	Tourists	Department of Tourism, MoEA
External trade	Customs declarations (quarterly)	DRC
Agriculture – Crop production	Census 2000 Survey 2003 Quarterly reports from Gewogs	MoA
Agriculture - Livestock	Census 2000 Quarterly reports from Gewogs	MoA
Forestry		Forestry Development Corporation

A-3. LIST OF THE STATISTICAL PUBLICATIONS SINCE 2000

Statistical domain	Publications	Date of last issue	Responsible
Population statistics	Results of Population and Housing Census of Bhutan Population and Housing Census of Bhutan – Fact sheet Population projections	2006 2006 2008	Census Commission, NSB
Health	2007 Annual Health Bulletin (yearly) National Health Survey 2000		MoH
Education	General statistics 2007 (yearly)		MoE
Labour	Labour Force Survey 2006 Labour Market Information Bulletin (bi-annual) Establishment Census Report	2007 2007	MoLHR
Income and living conditions	Household Income and Expenditure Survey 2000 (Pilot) Bhutan Living Standard Survey 2003 Poverty Analysis Report 2004 Bhutan Living Standard Survey 2007 Poverty Analysis Report 2007	10/2001 08/2004 12/2007 12/2007	NSB
National Accounts	National Accounts statistics 2000 – 2006 (yearly)	10/2007	
Price statistics	Consumer Price Index Bulletin (quarterly)	1st Quarter 2008	NSB
Monetary statistics	Monthly statistical Bulletin, September 2007 (quarterly) Selected economic indicators, September 2007 (quarterly) Annual report 2006/07	 01/2008	RMA
Government finance statistics	National revenue Report (2005-2006)		MoF
Industry	Industrial licences statistics 2004 Trade licenses statistics 2006		MoEA
Electricity	Power Data, Fiscal Year (annual) Energy Data Directory 2005(Survey)		Department of Energy, MoEA
Mines, Careers	(No publications)		Department of Geology and Mines, MoEA
Transport	Annual Information Bulletin 2006 Information, communications and transport sectors in Bhutan: a special report	07/2007	MoWHS MoIC
Tourism	(No publications)		Department of Tourism, MoEA
External trade	Bhutan trade statistics for the year 2005 (yearly)	07/2006	DRC
Agriculture	Agriculture statistics 2005. Volume I and II	07/2007	MoA
Synthesis publication	Statistical Yearbook of Bhutan 2007 (yearly) Bhutan at a glance 2007	10/2007	NSB

A-4. LIST OF PEOPLE MET DURING THE BSS ASSESSMENT

Ministry/Agency	Name of the Participants	Designation/office
Ministry of Health	Mr. Sonam Dorji	Chief Planning Officer
	Mr. Kado Zangpo	Information and Media Officer
	Mr. Rahar Singh Das	Asst. Information and Media officer
	Mr. Chimi Pelden	Asst. Planning Officer
	Mr. Dopo	Asst. Statistical Officer
Royal Monetary Authority	Mr. Pushpalal Chhetri	Head, Research Division
	Mr. Chenchu Dorji	Research Officer
	Mrs. Yangchen Tshogyel	Statistics Officer
	Mrs. Sonam Dema	Research Officer
Bhutan Chamber of Commerce & Industry	Mr. Phub Tshering	Secretary General
Department of Revenue and Customs, MoF	Mr. Sonam Gyelstshen	Asst. Commissioner
	Mr. Sonam Penjor	ICT Officer
Ministry of Economic Affairs	Mr. Karma Chhophel	Chief Planning Officer
	Mr. Subarna Lama	Head, Intellectual Property Division
	Mr. M.K. Lama	Head, DGM
	Mr. Dhanraj Subba	Chief Industries Officer, Dept. of Industry
Ministry of Education	Mr. Rudy	Consultant
	Mr. Rinchen Samdrup	Planning Officer
	Ms. Sangay Choden	Statistics Officer
Ministry of Agriculture	Mr. Tenzin Chhoefel	Chief Planning Officer, PPD
	Mr. Karpo Dukpa	Statistician
Kuensel Corporation	Mr. Chenchu Tshering	Dy. Managing Director
Japan International Cooperation Agency	Ms. Mayumi Miyata	Project Formulation Advisor
	Mr. Kinley Dorji	Sr. Program Officer
Centre for Bhutan Studies	Mr. Phuntsho Rabten	Sr. Researcher
Ministry of Labour & Human Resources	Mr. Karma Zangpo	Offtg. Chief Planning Officer
	Ms. Kezang Choden	Dept. of Employment
GNH Commission	Mr. Karma Galleg	Sr. Planning Officer
	Mr. Tandin Wangchuk	Sr. Planning Officer
Ministry of Home & Cultural Affairs	Mr. Karchung	Chief Planning Officer
	Mr. Tashi Penjor	Planning Officer
	Ms. Ugyen Lhamo	Planning Officer
National Statistics Bureau (NSB)	Mr. Kuenga Tshering	Director
Survey/Census & Data Processing Division, NSB	Mr. Phub Sangay	Dy. Chief Statistical Officer
	Ms. Nima Deki	Sr. Programmer
	Mr. Tshering	Asst. IT Officer
	Mr. Tandin Dorji	IT Manager
Coordination & Information Division, NSB	Mr. Cheku Dorji	Statistical Officer
	Mr. Tashi Dorjee	Statistical Officer
	Mr. Sonam Gyaltsen	Asst. Statistical Officer

Ministry/Agency	Name of the Participants	Designation/office
Adm., Finance & Human Resources Division, NSB	Mr. Palden Tsultrim	Adm. Officer
GIS Division, NSB	Mr. Thinley J. Wangdi	Sr. GIS Officer
National Accounts & Price Division, NSB	Mr. Dechhen Wangdi	Chief Statistical Officer
ICT Unit, NSB	Mr. Jigme Ngedup	Dy. Chief Statistical Officer
	Mr. Pem Namgyal	ICT Officer
	Mr. Rinchhen	ICT Technical Associate
Dzongkhag Statistical Officers	Mr. Sangay Dorji	Dzongkhag Statistical Officer
	Mr. Dorji Chedup	Dzongkhag Statistical Officer
Dzongkhag Sector Officials, Wangduephodrang Dzongkhag	Ms. Lekema Dorji	Assistant Planning Officer
	Mr. Sonam	Assistant Extension Officer
	Mr. Sahadev Thapa	Sr. Planning Officer
	Mr. Karma Tenzin	Dzongkhag Education Officer
	Mr. L.K. Shapkota	Dzongkhag Engineer
	Ms. Kezang Tshomo	Dzongkhag ERO
	Mr. Kaloo Dukpa	Dzongkhag Agriculture Officer
	Mr. Kin Gyaltsen	Dzongkhag CFO
	Mr. Tenzin	Dzongkhag Statistical Officer

A-5. REFERENCE DOCUMENTS AND INTERNET SITES

Documents

Central statistical organisation of Bhutan. January 2005. Third SIAP/UNESCAP Management Seminar for the Heads of National Statistical Offices in Asia and the Pacific. 31 January – 2 February 2005, Bangkok, Thailand

Technical assistance to the Kingdom of Bhutan for strengthening the National Statistical System Phase 2. November 2004. Asian Development Bank

Bhutan National Capacity Building Project for Statistics on Cultural Industries. Project proposal. May 2006. Unesco.

Bhutan's experience in data collection and dissemination of ICT statistics. Pem Zangmo. National Statistical Bureau. Thimphu: Bhutan. July 2006

GIS for Population and Housing Census of Bhutan 2005. Thinley Jyamtsho Wangdi. Geo-Informatics Division. National Statistics Bureau

Proceedings of the consultative workshop held at the College of Natural Resources in Lobesa from 26th -28th September 2007. Consultative workshop on strengthening the statistical system.

Organisational Development Report (Fast-tracked). National Statistics Bureau. Royal Government of Bhutan. (20th August to 14th September, 2007).

Bhutan's System of Designated Statistics, I.P. David, ADB technical assistance, August 2005.

Role of the National Statistical Bureau in supporting evidence based policy making. Redefining the role of the National Statistics Bureau in the present environment. Tashi Dorjee. 7th April, 2006.

The Statistics Act of the Royal Government of Bhutan. Draft. 2008. NSB

Country programme document for Bhutan 2008-2012. United Nations Population Fund

Country strategy and programme update 2004-2006 Bhutan. August 2003. Asian Development Bank

Decentralisation Outcome Evaluation Report – BHUTAN. UNDP, in co-operation with UNCDF, Danida, SNV, JICA, Helvetas and SD

Bhutan Country strategy paper 2007-2013. European Commission

National Framework for GIS implementation in Bhutan. August 2005. National GIS Coordination Committee, Center for GIS Coordination, Department of Survey & Land Records, Ministry of Agriculture

Bhutan: Selected Issues and Statistical Appendix. October 2007. IMF Country Report No. 07/349

Bhutan: Joint Staff Advisory Note of the Poverty Reduction Strategy Paper. March 2005. IMF Country Report No. 05/85

Country Assistance Evaluation of Bhutan –Summary. March 2007 Third Party Evaluation 2006, The Ministry of Foreign Affairs of Japan

National Workshop on Strengthening the Statistical System 28-30 December 1998, by Yeshey Dorji, Statistical Officer, Central Statistical Organization

Report on the Review and Work Status of Central Statistical Office, Ministry of Planning, July 1994

FAO/Government Cooperative Programme (Food Security Assistance Scheme) Plan of Operation, September 1983

Comments on the “Report to the Royal Government of Bhutan on Statistical Organisation, Staffing, and Legislation” by E.A. Harris, consultant on statistical organisation, U.N. Department of Technical Cooperation and Development, August 1985

International Monetary Fund, Statistics Department, Draft Report on the Multisector Statistics/GDDS Mission, Bhutan, March 16-30, 2004, prepared by He Qi (Head), Gary Barinshtein, Russel Freeman, Alberto Jimenez de Lucio, Manik Shrestha, Teresa Villacres (all STA), Sulekha Patel (World Bank), and Marlene Pollard (staff asst. STA)

Aide-Memoire of the Asian Development Bank Fact-Finding Mission for the Proposed Technical Assistance for Statistical System Strengthening of Bhutan, 3-9 April 1997.

Draft Report – Strengthening the National Statistical System of Bhutan by W McLennan, ADB TA No. 3669, January 2002

A Development Strategy for the Statistical System of Bhutan, I.P. David, ADB Consultant, Revised 7 September 2005

Macroeconomics of poverty reduction: the case of Bhutan. August 2007. The Asia-Pacific Regional Programme on Macroeconomics of Poverty Reduction UNDP Regional Centre in Colombo

Bhutan Millennium Development Goals. Needs assessment and costing reports 2006-2015. November 2007. Planning Commission. Royal Government of Bhutan.

Millennium Development Goals. Progress Report 2005 Bhutan. December 2005. Department of Planning, Ministry of Finance, Royal Government of Bhutan

Common Country Programme Action Plan (cCPAP) 2008-2012. Thimphu December 2007. Royal government of Bhutan and the United Nations System in Bhutan.

Websites

Bhutan Portal: <http://www.bhutan.gov.bt>

NSB : <http://www.nsb.gov.bt>

BhutanInfo database : <http://www.bhutaninfo.gov.bt/>

Paris21: <http://www.paris21.org>