

**STRATEGIES AND MEASURES FOR THE  
OFFICIAL STATISTICAL SYSTEM  
DEVELOPMENT  
OF THE LAO PDR 2006-2010**

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## 1. Introduction

This strategy is to elaborate and effectively put into practice the Decree No. 140/PM of August 20, 2002 regarding the organizational structure and operation of the national statistical system, and to improve the statistical system as well as to produce official statistics which are reliable in terms of completeness, accuracy, and timeliness. Since the statistical system of Lao P.D.R. comprises a number of organizations in ministries, ministry-equivalent authorities, provinces, Vientiane Capital, special zones, districts, villages and production units, the coordination among National Statistical Center and producers and users of statistics need to be improved. Responsibility allocation among various stakeholders is the most important issue.

Recently, the need to depend on statistics in decision-making has increased not only in socio-economic development planning but also in follow-ups and evaluations of the national objectives such as stopping opium poppy growing in 2005, stabilizing slash-and-burn cultivation and eradicating poverty in 2010, and freeing Lao P.D.R. from the status of least developed country in 2020. Statistics is also required in helping Lao P.D.R. to fulfill its responsibilities within regionalization and globalization frameworks. To accomplish these responsibilities under the condition of limited human resources, it becomes inevitable to prioritize the types of data to be produced. The production of statistics has its own uniqueness and steps which require various inputs such as personnel, organizational structure, scope, budgets, clear plans and procedures.

The National Statistics Center (NSC) which belongs to Committee for Planning and Investment is the coordinating body of production and dissemination of statistics and information within the national statistical system. It has created strategies and procedures as an operational guideline to develop the official statistical system of Lao P.D.R. for the period from 2006 to 2010.

The development of statistics is a duty that all stakeholders need to work on systematically and efficiently. The scope of official statistical system is determined by the Statistical Decree no. 140/PM of August 20, 2002, and its main contents are presented in Box 1 which defines official statistics as a description of the overall need of statistics instead of a necessary tool for coordinating policies of various sectors. At the same time, indicators (Appendix I) are the basis designed for initiating discussions on the possibility of supplying (statistical products) within the national statistical system taking into account

the scope of official statistical and the government's overall needs (the main needs for statistics of the government are for socio-economic planning, monitoring of national poverty reduction program, reports of Millennium goals progress, ASEAN development, and human resource development in Lao P.D.R.). However, these indicators need to be further improved to suit the actuality of the national statistical system at a particular time period. Responsibility allocation will lead to an efficient reporting system, which will produce data easily accessible for the users.

The main contents of the national statistics system strategy emphasize the need for national level statistics. Subject-matter strategies are not developed to include needs and uses of statistics specific for each ministries.. This strategy consists of two main components:

*1. What are the most fundamental requirements, or what are required to be done in the short run?*

*2. How does National Statistical Center utilize and develop its capacity in order to provide sufficiently high quality official statistics? The issue to be considered is that the number of personnel at present and their skills are still insufficient. Therefore, the ability to effectively carry out its mandate depends mainly on possibility of the NSC to improve its capacity both in terms of quantity and quality. NSC has evaluated the required skills of personnel, the results of which are reported in this document and is confident that it will be able to improve the capacity of its personnel by 2010. Otherwise, we will have to accept the concept of "the least acceptable statistical system" (Box 2), in which the questions for discussions could focus on "What can a tiny statistical agency do?"*

Detailed discussions on these two elements will be presented in Part 3 of this chapter. Once the strategy has been approved, it is necessary to develop plans, programs in order to put the strategy into action. Particularly, each sector needs to develop its own statistics according to the roles and functions specified in the Statistical Decree, using National Statistical Center as the coordinating body in developing or putting into practice the statistical strategy and carry out statistical work systematically.

Planning the development of statistical strategies is truly necessary. Particularly, continuing the study on resource allocation as well as determining the needs for both technical and financial supports. With such planning, main donors for the implementation of statistical strategy from 2005 to 2010 can be sought.

*In sum, the necessity of implementing this strategy is to follow established procedures for collecting social and economic data including quantitative and qualitative indices which are inevitable in our country. That is, the strategy will be an important operational guideline for the statistical system of Lao P.D.R., which consists of various organizations belonging to ministries, ministry-equivalent authorities, provinces, Vientiane Capital, special zones, districts, villages and production units. The system must have lucid coordination mechanisms and coherent rules for the operation as well as for capacity building in the whole system. At the same time, the strategy can be used as a guide for determining total and detailed budget requirements. Therefore, it is necessary to find a donor to support the capacity building of National Statistical Center, ministry-level statistical units (sector statistics), provinces, Vientiane Capital, special zones, districts, and production units from now till 2010. Since the conduct of official statistical work is inevitable but requires budgets, the development of statistical system requires investments from the government and both financial and technical supports from foreign countries.*

This document is composed of 5 sections:

Section 1 is the introduction emphasizing the need for developing the statistical strategy and determining measures for developing official statistics;

Section 2 presents briefly an evaluation of statistical work implementation focused on activities and outcomes in the past 4 years including evaluation of strengths and weaknesses of the current statistical system;

Section 3 deals with strategies and measures for developing national statistical system from 2005 to 2010. It will explain the overall needs for official statistics. The measures focus on data collection, determination of priorities in conducting surveys, human resource development as well as staff requirements of the entire national statistical system. The staff requirements are based on the specification of National Statistical Center's logistic position, the economic infrastructure needed, including rules and regulations specific to official statistics, development of a statistics dissemination system, operational procedures and an effective administration of the organization. In this section, budget requirements for implementing the statistical activities will also be presented. These budget requirements include total budget and minimum budget for producing the basic data<sup>1</sup> called "the minimum acceptable statistical system".

Section 4 deals with ways to emphasize the overall strategy for each field of statistics or for each sector, focusing on (1) population, labor and social statistics, (2) economic statistics using national account system as the center for integrating and monitoring the appropriateness as well as determining the scope and improvements of sector statistics

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<sup>1</sup> Although the statistical system can produce some basic data, such data are highly insufficient compared with the needs. Thus, it is necessary to consider developing a broader and more regular system which is presented as one priority in Table 1 of this document.

which support and are related to the computation of national account. The national account system is also the basics for classifications used in the region and in the world.

Section 5 summarizes official statistical development plan from 2005 to 2010.

**Box 1 : List of Official Statistics in Lao PDR**

Scope of official statistics	Possible data sources
1. Economic statistics	
1.1 Statistics of real sectors	
1.1.1 Agriculture, forestry and fishery statistics	Agricultural censuses, reporting system of agricultural production, annual household surveys, Lao Household Expenditure and Consumption Survey (LECS), village statistics books, specific agricultural sample surveys
1.1.2 Industries and handicrafts statistics	Enterprise canvassing to create a registry, surveys, annual enterprise samples surveys, quarterly enterprise surveys, annual household surveys, LECS, industrial statistics reporting system
1.1.3 Domestic trade and services statistics	Enterprise canvassing to create a registry, annual enterprise sample surveys, quarterly enterprise surveys, annual household surveys, LECS, industrial statistics reporting system
1.1.4 Tourism statistics	Records of tourists entering and exiting the country, surveys of tourists' expenditure and number of nights of lodging in hotels, annual household surveys, LECS
1.1.5 Public and foreign investments	Enterprise surveys, government records
1.1.6 Communications, transport, post and construction	Vehicle registrations, specific transport surveys, enterprise surveys, reporting system, annual household surveys, consumption and expenditure surveys
1.1.7 Hotels and restaurants	Enterprise surveys, annual household surveys, LECS, specific surveys
1.2 Monetary and fiscal statistics	
1.2.1 Fiscal statistics (government)	Government's fiscal system records, Ministry of Finance

**Box 1: List of Official Statistics in Lao PDR (Cont.)**

1.2.2 Fiscal and monetary statistics	Bank of Lao P.D.R.
1.2.3 Banking and insurance	Enterprise surveys
1.3 International trade statistics	Customs records, Ministry of Commerce
1.4 Balance of payment statistics	Customs records, bank statistics, LECS
1.5 Prices statistics	Price surveys, Ministry of Commerce
2. National account statistics	Data are available from various sources
3. Labor and salary statistics	Enterprise surveys, LECS
4. Social statistics	
4.1 Cultural statistics	Administrative records, time use surveys (LECS)
4.2 Population statistics	Population censuses, household surveys, population head counts
4.3 Education statistics	Administrative records, population and housing censuses, LECS, school mapping surveys
4.4 Public health statistics	Administrative records, population and housing censuses, woman and child health surveys, national health surveys, reproductive health surveys, LECS
4.5 Social welfare statistics	Annual household surveys
4.6 Accident statistics	Administrative records
4.7 Criminal and court statistics	Administrative records
4.8 Disables statistics	Population censuses
5. Environment statistics	Various data sources
6. Gender statistics	Analyses of various surveys
7. Poverty statistics	LECS, village statistical records
8. Sports statistics	National Sports Committee
9. Household economics	LECS, annual household surveys
10. Enterprise registration	Enterprise canvassing
11. Social organization and ethnic statistics	Population censuses
12. Living conditions	Population censuses, LECS, woman and child health surveys

**Box 2 : “The minimum acceptable statistical system”**

According to national goals and international programs, the overall systems of population censuses and sample surveys outlined in Table 1 need to be regularly implemented and maintained.. However, the actual capacity of the national statistical system of 2005 is still not dimensioned to meet the requirements specified in Table 1. Specifically, if the National Statistical Center does not receive outside technical and financial supports, it will be able to achieve only as follows:

- (1) Collect and analyze reports from ministries
- (2) Collect prices and compile monthly consumer price index
- (3) Compile gross domestic product in each year by activity using estimated growth calculated from reported data
- (4) Conduct small scale annual household surveys or irregularly conduct large-scale household surveys
- (5) Operate the village data collection system
- (6) Compile and publish annual statistical yearbooks

Given the fact that National Statistical Center is staffed with around 40 people, it is dimensioned to conduct surveys but not operate at the level of foreign statistical agencies. To achieve the objectives of this strategy, significant improvements in its organizational structure and technical capacity must be achieved. It is also important to adequately supply funds to concerned agencies within the national statistical system from central through local levels.

If it is difficult to supply the required resources, at least there should be some improvement in the national statistical system so that it will be able to produce data as required by the “minimum acceptable statistical system”. This system is simple and consists of the followings:

**a. Economic and macro-economic management-related statistics**

- Monthly consumer price index
- Quarterly production index for major products
- Quarterly index for construction materials
- Estimate every five-year base-year gross domestic product by activity and uses from baseline surveys and using data from the reporting system between the different base years (base year estimates from enterprise and household surveys and including enterprise registration surveys
- Annual international trade statistics

**b. Social and economic statistics**

- Every five years Lao household expenditure and consumption surveys
- Reproductive health surveys and maternal and child health surveys
- Village-level statistics on poverty evaluation
- Registry statistics (villages and enterprise units)

To run the “minimum acceptable statistical system” would require a minimum budget of US\$445,000 each year.

## **2. Evaluation of statistical work from 2000 to 2005**

### ***2.1 Actual statistical activities and results***

#### **2.1.1 Reporting system**

The progress of statistical work since 2000 has resulted from efforts of various authorities that form horizontal and vertical linkages to the national statistical system. Through these linkages, the National Statistical Center have put together data from ministries and provinces into annual statistical reports, 25-year and 30-year statistical reports. The center has collected, analyzed and drafted reports on price fluctuations based on monthly consumer price indices, as well as collected and analyzed poverty data according to the Prime Ministerial Decree No: 10/PM, dated: June 25, 2001. The center contributed to preparation of the 2<sup>nd</sup> human development report of 2001, formulated the guidelines for collecting village-level statistics (village-level statistics book) in a sample that covers 10 percent of all villages in the country. Each ministry has also been able to timely submit its reports and has prepared its own annual statistical reports. Each province has collected statistics and reported them to high ranking authorities. At the same time, the provincial statistics department has been able to produce annual statistical reports for use within that particular province.

#### **2.1.2 Activities and results of censuses and sample surveys**

From 2000 to 2005, NSC has in cooperation with other ministries accomplished a number of major achievements. A national health survey of Lao P.D.R. with report writing was completed in 2000. In the same year, a reproductive health survey was conducted. Participatory poverty assessment surveys were carried out in 2000 and 2002-2003. Annual opium poppy growing surveys were executed from 2000 through 2004. In 2001 analysis of labor market in Lao P.D.R was accomplished, supplemented by the 2002 non-agricultural labor survey. In 2003, a survey on border trade development was performed. In 2002-2003, the third expenditure and consumption survey (LECS III) with report writing was completed. Analysis of poverty in Lao P.D.R. was executed using the data from LECS III. In 2000 and 2003, population counts were done. An annual statistical supply and demand workshop was convened each year. Other accomplishments include business tendency survey in 2002, quarterly and annual business and retail store surveys from 2002 to 2004, annual household surveys from 2002, development of national account by calculating GDP from both production and expenditure sides, contribution to drafting a Millennium Development Goals report, taking the leading role in poverty analysis which was used in drafting the National Growth and Poverty Eradication Strategy (NGPES) document, carrying out the 2005 population census. All field works of the census were

completed in March 2005, and it is expected that all processes will be completed in early 2006. Furthermore, price surveys in relation to the International Comparison Program (ICP) were conducted in 2004 and 2005.

### **2.1.3 Infrastructure and others**

Since 2000, the National Statistical Center has spent due efforts to improve some important statistical infrastructure such as: improvements of its organizational structure and staff positions, initiating the Decree No. 140/PM regarding the organizational and operational structure of the national statistical system. At the same time, the National Statistical Center has acquired a modern information system for use in the national statistical system with powerful servers, homepage, network system, intranet system for linking data from provinces, Vientiane Capital and one special zone to the Center. Along with system improvements at local levels, the National Statistical Center has provided computers to 129 districts, and will continue to provide to the rest of the districts in the future.

### **2.1.4 International cooperation**

Apart from building up a national statistical system in Lao P.D.R., the National Statistical Center has extended its cooperation internationally aiming at attracting financial and technical assistance that are needed for developing and improving the capacity of the system. The cooperation is divided into different types such as the Lao-Sweden Cooperation Project on Statistics supported by SIDA, capacity-building in population science and planning supported by United Nations Population Fund, preparation of human development report supported by the United Nations Development Program, capacity-building on participatory poverty monitoring and evaluation financed by Asian Development Bank. Other international organizations also provide some technical assistance to National Statistical Center.

Throughout these years, the National Statistical Center has organized the 5<sup>th</sup> Asean Head of Statistics Organisation Meeting (AHSOM5) on Official Statistical Principles and Dissemination and participated in many other international meetings.

## ***2.2 Lessons learnt and weaknesses***

### **2.2.1 Lessons learnt**

Because leaders of Committee for Planning and Investment consistently provide guidelines and directions on the operation of national statistical work, the National Statistical Center can perform a central role in collecting, summarizing, analyzing and disseminating official statistics which are important for socio-economic development planning of the government and for general Lao and foreign users.

As the National Statistical Center has limitations in the quantity and quality of personnel, budgets, and infrastructure, the national statistical system is still inadequate. Although the Center has Decree No. 127/PM, part of the contents is not appropriate for the present situation. Therefore, the National Statistical Center has initiated Decree No. 140/PM of August 20, 2002 regarding the organizational structure and operation of the national statistical system. To put this latter Decree into practice, Directives have been issued and adopted in the Center as well as in provinces and ministries.

The organizational structure of the national statistical system, particularly that of the National Statistical Center, has been constantly improved to suit the reality of each time. Such improvements can be observed as follows. The former Director of National Statistical Center has been promoted to Permanent Secretary of Committee for Planning and Investment, two Deputy Directors of National Statistical Center have been promoted to Director Generals, two Division Chiefs have been promoted to Deputy Director Generals, and eight outstanding staff members have been promoted to Division Chiefs. Some new staff members have also been recruited in order to replace those moving to other jobs. At the same time, the National Statistical Center always tries to improve the quality of its personnel through providing fundamental statistics training courses (for the NSC staff members with no prior statistics knowledge), intermediate and advanced statistics training courses (for the NSC staff members with basic statistics knowledge), prices and price indices training courses, village-level statistics training courses, survey methodologies training courses, computer skills training courses, and holding annual meetings on the producers and users of statistics. Some NSC and provincial staff have also been sent to attend domestic and international training courses related to information management and statistics.

The National Statistical Center has made special efforts on improving its coordination with provinces, ministries, and international organizations. The coordination is important for collecting, compiling and analyzing data from each sector within the reporting system. For survey data, the National Statistical Center works with provinces in order to conduct its needed surveys such as Lao Household expenditure and consumption survey (LECS), population and housing census, and others. NSC also conducts some surveys jointly with other organizations/ministries such as gender statistics survey with Lao Women Union, the 2000 fertility survey and the 2000 national health survey with Ministry of Public Health, and the 2005 prices survey for international comparison with Asian Development Bank.

In the past years, the National Statistical Center also received financial assistance from international organizations, particularly from the Swedish International Development Agency (Sida) for building up the statistical infrastructure such as the Information Technology (IT). With this IT support from SIDA, NSC could link and exchange data with provinces and some ministries. SIDA also assists NSC in capacity building by training NSC staff on survey methodologies including methodologies of population and housing census, Lao household expenditure and consumption survey, database management and national accounts following the 1993 United Nations System of National Account.

The results of the thus-far mentioned surveys are the basis for constructing various databases of National Statistical Center such as Lao household expenditure and consumption survey database, population and living condition survey database, national agricultural statistical survey database, opium poppy production survey database, and others. These databases serve a number of socio-economic purposes such as for poverty analysis, analysis of socio-economic conditions of Lao P.D.R., for calculating national accounts, and for information needed in inviting foreign assistance, as well as providing data to public and private researchers.

### **2.2.2 Weaknesses**

In spite of the existence of Decree No. 140/PM concerning the organizational structure and operation of the national statistical system, the Decree has not been strictly and widely adopted, especially at the district level and in some ministries.

The organizational framework of the national statistical system has not been well structured. This is indicated by the fact that even within the National Statistical Center itself, there are some important positions which are vacant. Some ministries, departments and production units still do not have statistics divisions or sections. Statistics sections of provincial departments have no statistics unit. Those which have a statistics unit do not have sufficient staff. District offices have only one statistics staff who takes care of both planning and statistics, and many others do not even have any statistics staff at all.

Furthermore, many staff members of the national statistical system have limited knowledge of and expertise in statistics. Very few staff have academic background in statistics. This limitation leads to inaccurate, imprecise and delayed collections, and compilations of data as well as analyses within the reporting system. Most statistical reports are annual reports, while monthly, quarterly or seasonal reports are lacking in many sectors. Therefore, it is difficult to make some calculations based on the calendar year or fiscal year. The lack of monthly, quarterly or seasonal reports in some sectors is not consistent with the directives and guidelines specified in the Decree No. 140/PM.

Field surveys have not been duly attended to, and the overall quality of the statistical system is still low. While conducting surveys, not all required data are recorded; field inspections and designing data codes and data entry are not carefully conducted. These problems will have to be solved within a survey quality scope.

Staff reallocations in the past years have also occurred, and in many cases the successors have no experiences in dealing with statistical work, making coordination difficult. So far, there is no uniform data collection format. Each section works independently based on its own data collection format, leading to difficulties for the National Statistical Center to compile and interpret the results.

Data and information dissemination is still limited and the use of statistics is still low. Official statistics cannot meet potential users' needs, and at the same time users do

not have easy access to available statistics. Publication of survey data is also limited and incomplete.

National Statistical Center has tried to set up an intranet to ease communication between the National Statistical Center, provinces and some ministries, and has set up a Network within the National Statistical Center. The center has also provided computers to districts and provided computer training to provincial and district officials. However, the center has not been able to monitor the usage of computers at the provincial and district levels. Provinces and districts have not paid due attention to protect the equipment and have not been able to effectively utilize it. Because of poor maintenance, many computers at the district level cannot be used any longer. Most districts use computers only for typing documents but not for compiling and calculation or analysis of data.

With limited government budgets, foreign donors' assistance continues to play an important role in the development of statistical system in Lao P.D.R. Most of the foreign assistance comes from SIDA, and Statistics Sweden provides technical supports for conducting annual surveys and five-year surveys.

### **3. Strategies and measures for the development of official national statistical system: 2006 – 2010**

#### ***3.1 General needs of statistics***

The National Statistical Center plays a central coordinating role within the national statistical system, and is responsible for planning and designing strategies aiming at producing high quality official statistics to meet the government needs in designing social and economic development policies and plans. The strategies will also be a good guidance for organizations concerned with the production of official statistics.

High quality statistics comprises the following characteristics. It must be collected and processed following scientific steps commonly used by regional statistical agencies. It must be accurate, precise and consistent with the real social conditions, and must be trusted by users. It must be timely disseminated in an easy to understand format. It must also be accessible and comparable. Besides, all statistics must be accompanied by a metadata document, which describes in details the characteristics of data and preparation procedures so that both data producers and users can be able to assess the data quality. The

metadata document should help how to use the data and how to make future improvements.

The main uses of statistics are as follows:

1. For macroeconomic policy making, NSC will use United Nations System of national accounts or the 1993 national account system as a model for improving the existing national account system of Lao P.D.R., including GDP calculated at current and constant prices divided by activity, and GDP calculated from the expenditure side by main type of expenditure (household and government consumption, capital formation and exports minus imports), and annual and quarterly GDP growth estimates. The supply of sector-wise statistics for the calculation of national account is a new requirement of the national statistical system. Enterprise and household surveys need to be developed and maintained for use as annual estimates. Creating enterprise registration statistics is highly necessary for ensuring full coverage of annual enterprise survey, and an updated enterprise registry will form an important source for sample surveys.
2. To prepare for joining ASEAN free trade area, and to accomplish World Trade Organization requirements, it is inevitable and a responsibility of Lao PDR to improve foreign trade statistics of Customs Department. These preparations are also urgently needed in the national accounting.
3. For population planning and social policy development, NSC conducted a population census in March 2005, and it is expected that another census will be conducted in 2015. A population count may be needed in the mid-year of the census period to evaluate previous population projections and domestic migration. Reproductive health surveys will be conducted in late 2005 and 2010 to provide up-to-date information on fertility levels, determinants of fertility and reproductive health situation. NSC in cooperation with organizations concerned need to have measures and funds to promote village-level registrations required for population counting.
4. To monitor poverty reduction and eradication in Lao P.D.R. by assigning sufficient human resources to carry out the monitoring work as well as providing basic social statistics related to poverty levels, gaps and discrete poverty ratios. Household

survey program and village statistics books are the main sources of poverty data. Poverty monitoring requires inputs from all sectors, and the outputs, outcomes and impacts must be systematically monitored.

5. The government aims to use the IMF's General Data Dissemination Standard (GDDS), which can help data producers to consistently monitor and improve their data quality. The dissemination guideline consists of four components such as on data (scope, time period, reporting means), accessibility, coverage, and on data quality and future improvement plans including budget requirements.
6. The National Statistical Center is the coordinator and the source of statistics, and it is responsible for developing statistics for use in monitoring indicator indices of socio-economic development, poverty and environment which are consistent with the national poverty eradication goals set in NGPES, social and economic development program (SEDP), the Millennium Development Goals of the United Nations (MDG), ASEAN indicator indices, and the human development index program.
7. To improve the national statistical system from now to 2010 up to the average standard of the ASEAN countries, it is necessary to have adequate human and financial resources to implement prioritized activities of the national statistical system. Such requirements will be outlined in details in Sections 3.4 and 3.5.

### ***3.2 Official statistics collection systems***

The official statistics system in Lao P.D.R. consists of two major data sources: the reporting system and surveys (censuses<sup>1</sup> and sample surveys). The reporting system relies on administrative record keepings in each sector, and such recorded data are reported to National Statistical Center through concerned ministries and provinces. Sector-wise statistical work is implemented through each ministry with two reporting systems:

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<sup>1</sup> Census means a survey in which all units are surveyed

1. The first system is the system in which the data are collected and reported by all sections of each ministry. For example, schools must collect, compile and report data to Ministry of Education because schools comprise one sector of the Ministry of Education; hospitals or clinics need to collect, compile and report data to the Ministry of Public Health because hospitals or clinics are a part of the Ministry of Public Health. School and hospital data can be easily collected because they are data from administrative reporting systems (including private organizations). Households and businesses are also reporting units but different in terms of accessibility of data. Household and business data are difficult to collect because households and businesses carry out a variety of activities and operate freely. Therefore, there might be cases of under-reporting or over-reporting.

2. The second system is based on the operation of National Statistical Center. That is, National Statistical Center collects the data from village statistics books which form the reporting system of village authorities or village heads who are responsible of recording village-level data including annual poverty data. However, this reporting system relies on samples of 10% of all villages in the country.

Full-coverage and sample surveys which collect data from households and business units comprise an important responsibility for NSC as well as for other organizations within the national statistical system. The statistical development strategy concerns mainly with censuses and sample surveys. Small sample surveys are conducted regularly in order to investigate economic conditions of households and businesses, and are one part of the data collection system. These small sample surveys can provide various types of data such as on poverty, basic household economics including agricultural household production. Population and housing censuses and agriculture censuses<sup>2</sup> are two important types of surveys which have to be conducted once every decade. Reproductive health surveys and household expenditure and consumption surveys have to be done once in five years.

Households are sampling units of the statistical system, and they are important production units in agriculture. Agriculture accounts for a large proportion of the Lao economy. Households also engage in other activities such as handicrafts, retailing, construction and others. Therefore, the statistical system of Lao P.D.R. depends mainly on data collected from households, which require large financial resources. The statistical

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<sup>2</sup> The 1998/99 agricultural census was a very large sample surveys

production system in Lao P.D.R. is in different grade shared by NSC, ministries, ministry-equivalents, provincial level authorities, district authorities and villages. As such it is a complicated system.

The statistical reporting system is operated with minimum control from the central level. Although such system is cost effective for the central level organizations (ministries and NSC), it is cumbersome for provinces and districts. If the central organizations would control and monitor the data collection from the reporting system, high quality and detailed statistics can be obtained. However, it will still be difficult to produce high quality data for all economic aspects particularly short-term macroeconomic indicators.

One major problem of this strategy is to consider how to combine the reporting system and sample surveys into one integrated system of the government in order to avoid overlapping works. The organization which is responsible for conducting surveys should have influence over the design and scope of the reporting system. Up-to-date registration of enterprises is very important for improving the quality and planning of effective business surveys. This registration is needed before statistical surveys can be conducted. Village and zone registrations are needed for framing household surveys. Enterprise censuses requires large funds for a smooth and sustainable operation.

The plan of censuses and sample surveys of the national statistical system until 2010 is presented in Table 1. Objectives and contents of regular enterprise surveys, household surveys, and public health surveys are reported in Table 2. The statistical development plan may be too broad and difficult to be implemented under limited human and financial resources. For this reason, Box 2 raises the concept of “the minimum acceptable statistical system”. Uncoordinated survey schemes runs a risk of duplication of efforts which can also be a problem having both survey data and data from the reporting system. The statistical strategy needs to find cost-effective ways of combining the survey data with data from the reporting system. Some concepts regarding this matter can be found in Box 3.

A given statistical agency is responsible not only for conducting surveys, but also for other tasks such as collecting, compiling, processing, reporting and disseminating the data. Therefore, it is necessary to develop and improve the statistical infrastructure which is

related to registries, sample selection frames, field work implementation, data processing capability, database maintenance and usage, sample selection and estimation, survey metadata document production, dissemination and forming coordination mechanisms.

**Table 1: Full-coverage surveys and sample surveys: 2005-2010**

Activities	Duration and starting time	Estimates: N=National P=Provincial D=District R=Regional	Priority
Population census	2005	D	1
Agricultural census/large sample survey	2008/9	D	2
Reproductive health survey	2005	N,P	1
Mother and child health survey	2006,2010	N	1
Population count	2010	N	3
Annual household survey	Every year <sup>3</sup>	N	1
Lao household expenditure and consumption survey	2007/08	N	1
Village statistics books <sup>4</sup>	Every year	P	1
Enterprise survey and enterprise registration	Every year	N	1
Enterprise sample and business trend survey	Every three months	N	1
Enterprise canvassing	2006	D	1
Environment statistics		N	3
Labor survey		N	3
Consumer price index survey	Every month	N,R,P	1
Producer price surveys, main manufacturing products	2003 <sup>5</sup> , quarterly		
Building material price index survey	Every three months	N	1
Export-import prices survey	Every three months	N	3
International comparative prices survey	2005	N	1

Note:

- Priority 1 activities are the necessary activities and already have financial supports
- Priority 2 activities are the necessary activities that do not yet have financial supports

<sup>3</sup> Except 2007 when Lecs IV will be conducted

<sup>4</sup> Village statistics books are a tool used for administrative data collection and reporting

<sup>5</sup> Producer price index under construction

- Priority 3 activities are important activities with no financial supports

**Table 2: Selected substances of official statistical surveys**

Objective	Macroeconomic policy, national account		Living condition monitoring, social indicators	
	Production statistics			
Data and information demand	Formal	Informal	Household consumption	Household and individual social indicators
Survey	Enterprise surveys	Household surveys	Lao household expenditure and consumption surveys	Health and demographic surveys
Annual survey plan	<i>Annual enterprise surveys</i> <ul style="list-style-type: none"> <li>- Labor</li> <li>- Total output</li> <li>- Capital</li> <li>- Investments</li> <li>- Building materials</li> </ul> <i>Quarterly enterprise surveys</i> <ul style="list-style-type: none"> <li>- Total output</li> <li>- Employment</li> <li>- Producer prices</li> </ul>	<i>Annual household surveys</i> <ul style="list-style-type: none"> <li>- Building</li> <li>- Non-agricultural business</li> <li>- Agricultural output</li> <li>- Consumption</li> <li>- Income and remittance</li> </ul>	<i>Household surveys (5 years surveys)</i> <ul style="list-style-type: none"> <li>- Consumption and expenditure</li> <li>- Income/agricultural value</li> <li>- Income/household business value</li> <li>- Building</li> <li>- Labor</li> <li>- Food</li> <li>- Possession of fixed assets – houses</li> </ul> Extended modules on: <ul style="list-style-type: none"> <li>- Health</li> <li>- Education</li> <li>- Time use</li> </ul>	<i>Reproductive health and national health surveys</i> <ul style="list-style-type: none"> <li>- Family planning</li> <li>- Maternal and child health</li> <li>- Diseases</li> <li>- Health care service utilization</li> <li>- Health check</li> </ul> <i>Village-level surveys</i> <ul style="list-style-type: none"> <li>- Village population</li> <li>- Number of poor households</li> </ul> <i>Health and education</i> <ul style="list-style-type: none"> <li>- Access to transport, clean water supply and electricity</li> <li>- Agriculture, planted land area, harvested area, and output</li> <li>- Livestock, fertilizer use, fisheries, forestry</li> <li>- Small business enterprise number (village registration)</li> </ul>

### ***3.3 Strategies and measures for supporting national statistical system***

#### **3.3.1 Human resource development**

Appropriate financial resources must be allocated to human resource development in order to train staff of the national statistical system, in the National Statistical Center as well as in ministries and local authorities. Training will focus on building knowledge and skills in statistics and information technology. To ensure an adequate supply of human resources within the national statistical system, the National Statistical Center needs to have and follow its operational plan in providing the needed training to statistical system staff members. At the same time, all parties concerned need to take part in the implementation of the plan by inviting both domestic and international financial supports. The major problem of the national statistical system at the present is related to human resource development. Currently, the system has very limited staff both in terms of quantity and quality. To facilitate the process of staff development, National Statistical Center has developed a staff requirement plan specifying clearly all positions (see Appendix III and IV).

Poverty statistics is one important work so the staff concerned at the National Statistical Center, ministries, provinces, districts and other concerned need to be trained on this issue. To accomplish this task, there must be more and more funds devoted to this area because poverty statistics is a new and long-lasting activity.. Regional contributions to this effort, particularly supports from ASEAN member countries have increased in recent years. Analysis is a central need for improving the use of statistics and information. Currently, NSC has not paid due efforts to this activity. To develop the national statistical system, there is an urgent need to pay sufficient attention to analytical work. For this reason, the National Statistical Center has participated in the development analysis network (DAN) in order to learn how to improve its analytical capacity.

According to the major tasks of the national statistical system to be conducted from now to 2010 (as described in Table 1 and activity matrix of Appendix 5), the National Statistical Center needs to have a comprehensive training plan which involves providing training to statistics staff of ministries, provinces and districts. The training will not only focus on concepts and principles but will also try to transfer fundamental statistics

knowledge to newcomers, as well as to transfer knowledge of macroeconomic management, analysis, and statistical probability analysis to all staff.

The development of statistical methodologies has becoming increasingly important; there is huge demand for international standard development techniques in all working aspects. For example, in using the 1993 national account system and in price index theory and in other areas such as. environment statistics and in developing social indicator criteria. General statistical methodologies include sample selections for household and enterprise surveys, calculation and adjustment techniques, statistical inferences based on sample survey data, population projections, estimation of labor supply and demand, quality controls in statistics production, and the design and usage of international standard table of contents.

In conclusion, there is a need for human resource development planning in all levels of the statistical system, the size of which depending on the staff development in the future. The National Statistical Center as the coordinator needs to play the leading role and adopt appropriate coordination mechanisms for promoting smooth program implementation in each phase. The National Statistical Center also has to play the leading role of inviting development funds from both domestic and international sources to meet the actual need of the national statistical system.

### **3.3.2 Statistical infrastructure**

National statistical system development must be accompanied by infrastructure development. To serve statistical production purposes, the following two issues are important:

- To ensure thorough data collection and recording; that is the data will be accurate, timely and of high quality, local statistics authorities need to improve their statistical work implementation capability.
- To improve the data processing capability and the management of the overall statistical system.

To improve the capacity of local statistical authorities, it is necessary to strengthen the statistics offices at all aspects of statistical work.

Currently, NSC has an internet server for data storage and it is a part of network which can be used for processing a large quantity of data as well as for developing program usage skills. The long-term statistical development plan of NSC is to develop Information Technology (IT) which will be used for data processing purposes of all users.

These programs include improvements and upgrading of both hardware and software to acceptable standard, and improvements of computer network system.

The National Statistical Center will continue to improve and develop a high standard database management system, including database arrangement system, database protection, operation, safe data storage and archives. The National Statistical Center has selected Microsoft SQL server for use in designing and maintaining databases, and Visual Basic program, Access and others connected to scanners for data entry and processing. SPSS program is used for data analysis.

Generally speaking, the use of an internal network system (LAN) is necessary for the national statistical system. Endowed with limited human resource, it is important to employ modern technology for data entry, analysis, receiving-sending and accessibility. Additionally, it is also important to develop a skilled labor force which can adopt modern technology.

External databases constructed by NSC such as from the fertility health survey and national health survey have been transferred into the data bank of National Statistical Center for safety as well as making data publicly accessible after reports have been disseminated.

National Statistical Center will promote the use of intranet throughout the national statistical system, particularly in transferring data from provinces, and will use internet for communications with data users.

Since NSC possesses insufficient knowledge and skills on information technology for maintaining networks and databases, sustainability in information technology will be crucial for future statistical work development.

Until 2010, it will be necessary for National Statistical Center to emphasize on technological developments and management quality policies in the operations of all authorities concerned. Cost reductions through more efficient data collection procedures and processing methods are urgently needed.

*The information technology improvement vision of the National Statistical Center is to continue to promote intranet use developed for statistical producers, and to develop a web site for other users. To make information technology sustainable, National Statistical Center as the leading coordinator in cooperation with other stakeholders needs to focus on skills and knowledge development.*

### **3.3.3 Coordination mechanisms**

Prime Minister's Decree no. 140/PM is the legal framework of the national statistical system. National Statistical Center has been mandated to take the central role in carrying out the national statistical work as well as to play a coordinating role. To pursue the development of modern statistical system, National Statistical Center has to allocate sufficient resources for developing mechanisms of coordination among statistical producers and users. Currently, National Statistical Center has already allocated some resources to this activity. The basic tools used for this coordination purpose include annual meeting of statistical producers and users, and other activities related to the coordination on contents and survey implementations. In addition, such coordination work is also needed at ministerial and local statistical authorities.

*To ensure system sustainability, the National Statistical Center, as the coordinating body within the national statistical system, will continue to develop coordinating mechanisms through convening annual meeting of statistical producers and users, develop good relationships with users through high-ranking officials and technical meetings. At the same time, NSC has to support ministerial and local statistical authorities in improving their coordination networks, organizational structures, data collection systems, and in developing their sector statistical strategies up to 2010. This supporting role played by National Statistical Center is very important for national statistical system integration in the way set up in Decree no. 140/PM.*

### **3.3.4 Dissemination of statistics**

Effective dissemination of statistics to general users needs to be emphasized from the aspect of methodologies and tools. National Statistical Center is crucial for developing an official statistics dissemination vision and for the implementation of official statistical system since it is the central coordinator between statistical producers and users. National

Statistical Center will use GDDS data dissemination system as a framework and principle in the development of official statistics dissemination system. The GDDS system is used in many countries, especially among ASEAN countries. Based on agreement of three major organizations, the Bank of Lao P.D.R., Ministry of Finance, and the Committee for Planning and Investment (NSC), the GDDS system has been used for technical assistance priorities and for coordination among donors. This system will also help NSC in fulfilling the following development responsibilities:

- Continue to improve its policy so that it will be able to meet the users' demand by disseminating statistics via various media such as magazines, diskettes and CD-ROM, internet, reports, and convening meetings and seminars. Each method of dissemination can serve specific groups of users.
- Moving to website solutions in dissemination of statistics
- Create official statistics dissemination policies and publications. Along with the publication of annual statistical yearbooks, quarterly statistical books must also be developed.

### **3.3.5 Legal framework of official statistics**

The government has endorsed Decree 140/PM regarding the organizational structure and operation of the national statistical system as legal framework of National Statistical Center. The Decree emphasizes the roles, responsibilities and legal rights of National Statistical Center, ministries, provinces, districts and villages in data collection and reporting. The Decree will have clear effects on the attempt to pursue capacity building of the statistical system and society of Lao P.D.R. It will also contribute to raise coordination efficiency through the use of annual statistics producers and users meetings as venue for discussions on statistical plans and others.

After evaluating the implementation of Decree 140/PM in the past years, it is found that the following issues need to be improved. First, the Decree needs to be promulgated into the Law so that National Statistical Center and other organizations in the national statistical system will have full rights in executing the national statistical system. This improvement will include making the national statistical system independent in technical operations and the adoption of international standards for data production and

dissemination. National Statistical Center foresees that Decree 140/PM will become the Law before 2010.

Once this strategy has been endorsed, NSC will coordinate with the authorities concerned in designing a detailed plan for drafting the statistics law and submit the draft to the government by 2007/2008.

### ***3.4 Development of statistical plans, working procedures and organization***

The NSC will not be able to improve and expand existing databases if there is not sufficient and continuous training of the statistical staff. At its current stage, the national statistical system is endowed with limited human resource which is a major constraint in implementing the coordination and statistical system management programs, and in meeting donors' requirements. If the number of staff increases only marginally, it will affect the possibility to successfully conduct required surveys and others. Continuous supports of the government and donors from now to 2010, and an increase of staff numbers at both central and local levels will make the development of an effective national statistical system possible (staff requirements by designations are shown in Appendix III).

Currently, NSC consists of five divisions:

- (1) Administrative Division
- (2) Data Collection Division
- (3) Survey Division
- (4) National Account Division
- (5) Information Services and Technology Division

At present, National Statistical Center has a small number of staff, making it difficult to operate widely. If National Statistical Center can increase its role, it may receive trusts and be able to attract assistance such as technical and financial supports from various organizations. Currently, some ministries have only one or two staff working on statistics in Planning Division, or three to four staff working on statistics in Statistics Division. So far there is not any uniform statistical system among ministries (see Appendix III).

However, the organizational structure of the statistical system will change according to the reality in each time period and to the needs of statistical users. The increase in staff numbers should occur at all levels of the system. The current staff limitation in terms of

number and quality has to be solved in order to make the labor division of the statistical system clear.

*To implement statistical development plan according to the needs specified in Section 3.1 from 2005 to 2010, the number of staff in all levels of the system has to be increased. Currently, NSC has only 41 civil servants, and by 2010, its staff must grow to 100 persons. There are altogether 39 civil servants working on statistics in ministries, and by 2010 there must be 92. At provincial level, there are currently 65 statistics officers and by 2010 there must be 93.. Currently there are 200 statistics officers in districts, and there must be 284 by 2010. Each sector of a ministry and department of a particular province must have one to three statistics staff (see Appendix III).*

### **3.5 Minimum budget requirements**

As the volume of statistical work and the number of staff in the statistical organizational structure must increase, the budget demand for implementing the statistical system will also increase (see Table 1 for information on the plan of full-coverage and sample surveys in the period of 2005-2010). The total budget requirement per year is estimated at 11.4 billion Kip (1 million dollar).

So far, most of the funds used for implementing the national statistical system have come as grant aids given by international organizations, particularly Sida. Government budgets devoted to the implementation of statistical work have not been sufficient compared with government budgeting for the statistical work in other developing countries. Nonetheless, financial assistance from international organizations will be decreased; for instance, Sida will stop funding the program after the completion of the 5<sup>th</sup> phase (2005-2008). After that foreign assistance in this area may decline, bringing in the need for a gradually increased government budget allocation as well as the need to attract funds from other donors (see Appendix IV.1 and Appendix IV.2).

In the era of high demand for data and information or the era in which our country is joining regional harmonization and integration processes, this strategy tries to specify the scope of statistics which is called “the minimum acceptable statistical system”. This system will be adopted in the case there are insufficient financial resources. A preliminary estimate of the financial requirements is presented in Appendix 4; the activities in color are those activities which have to be conducted in “the minimum acceptable statistical system”. The financial requirement for carrying out this system is approximately 4.9

billion kip or 445 thousands U.S. dollars per year (this budget does not include staff salaries and wages).

**Table 3 : Estimates of total budget requirements for implementing the statistical strategy in the period of 2005-2010**

Unit: millions of Kip

Items	2005	2006	2007	2008	2009	2010	2005-2010
Total budget required for carrying out the statistical strategy	4,181.0	12,315.0	10,101.0	12,757.0	17,435.0	11,595.0	68,384.0
Budget required for carrying out “the minimum acceptable statistical system”	3,921.0	4,840.0	3,940.0	3,680.0	1,780.0	10,970.0	29,131.0
Percentage of total requirement	93.8	39.3	39.0	28.8	10.2	94.6	42.6

Data source: Estimated from Appendix V.1

Using the average salary of 350,000 Kip per person per month, and the plan for increasing the number of staff in the entire national statistical system as stated in Section 3.4, the size of budget for salaries is estimated to be 1,939 billion Kip per year (see Appendix IV.3).

To effectively operate the statistical system under a limited government budget, all statistics authorities at all levels need to be active in attracting assistance from donors. All assistances should be based on the priorities of the statistical system as specified in this strategy. To operate a statistical system with future expansions, it will become necessary to seek additional budgets for local statistics authorities. One way of meeting budgetary requirements is to generate own income through selling statistical products, providing surveys, data analysis services, and others.

Once this strategy and mechanisms for developing the statistical system from 2005 to 2010 has been accepted by CPI, they will be brought into public awareness at the official statistics producers and users meeting of 2005. In this way, detailed

implementation and budgetary plans will be created, and such plans will then be submitted to the government and donors.

The National Statistical Center is confident that the budgetary plan proposed in this strategy will be necessary for a sustainable operation of the statistical system.

## **4. Overall strategy for subject matter statistics**

### ***4.1 Population and social statistical system***

This system has advanced quite adequately. As can be observed in Figure 1, the system is mainly based on full-coverage surveys, administrative reports, village-level statistics books, and sample surveys. The sample surveys are mainly annual household surveys, five-year household surveys which are used for a number of purposes (LECS), maternal and child surveys and fertility surveys. The latter two are to be conducted once every five years. Some surveys in the past overlapped in some ways. Therefore, it is necessary to improve the survey system in order to increase its efficiency. Village data collection needs not only aim at counting the number of households and population, but must collect infrastructure data particularly hospitals, schools, electricity, market places and others.

#### **4.1.1 Population statistics**

In general, population statistics come from population and housing censuses, sample surveys, and birth, death and migration registrations. The main component is the three population censuses conducted in 1985, 1995, and 2005. The latter two censuses included collection of housing data. The main purpose of population and housing census is to count the total number of people living in the country. At the same time, the census is to collect information related to the population by age, gender, births, deaths, education, and social activities of the population as well as housing conditions

With the above information, the population census allow the estimation of population growth, domestic migration, and population size. The census will also provide necessary information for improving the birth-death registration system, which is conducted by the village heads. The data from the previous censuses form basis for

selection of sample sizes and other statistical surveys. The demand for estimating population size has been steadily increased, especially the detailed estimation of population by age groups and gender for use in projection of labor force and school enrollment. In analyzing gender issues, population censuses are the major data source. General social statistics are also based on population statistics. Therefore, statistics concerning gender issues must be one component of population statistics.

Since the birth-death registration in our country is not complete at this stage, there is a need to improve this registration in the future through village-level statistics. Sample surveys for collecting social statistics can also be used as one component for improving the population statistics system and birth-death registrations

Main tasks to be conducted in the future include:

- (1) Systematic quality control and coordination of population statistics at all administrative levels in the country.
- (2) Planning for sampled population surveys (counts) for population projections.
- (3) Planning for future country-wide population and living condition census and other activities in order to maintain and improve population statistics system.

*Population survey strategy without using population registration and interim projection is based on sample population survey and some information of fertility.*

*In the near future, National Statistical Center will consider and coordinate with organizations concerned for creating a geographic information system (GIS), making computerized maps able to draw surveyed area. This will increase access to maps which can be used for selection of sample survey sites.*

#### **4.1.2 Labor statistics and working conditions**

Labor statistics are based on household and enterprise surveys sampled from household and enterprise registrations. Labor statistic programs usually comprise data on labor force, wages and salaries, incomes, work-related injuries and sickness, as well as on

labor demonstrations, factory closure, and other activities. Labor surveys are carried out annually and quarterly. Some advanced countries conduct labor survey monthly in order to compile key economic indicators. Labor surveys are sample surveys so it cannot supply detailed data on employment, jobs, and types of economic activities, which are needed for planning at the local level, and are not sufficient for labor market and public health analysis. These types of data can be obtained only from population surveys. Generally, labor market data are to:

- provide basic statistics for employment, unemployment and underemployment analyses, to be of help for policy makers in job creation and socio-economic development of the country.
- Make it possible to estimate labor supply
- Provide basic data for labor force development planning
- Make it possible to estimate labor demand through measuring overtime working hours, labor movements and job openness making all positions accessible by society. Provide reliable data for projections of self-employment and small family-based businesses including agriculture, forestry and fisheries businesses. Both are one important component of national income and contribute to family income generation.

Currently, there is not a specific plan for conducting labor surveys. A labor section was included in Lao household expenditure and consumption surveys of 1997/98 and 2002/03. These surveys also include collection of data on time use allocated by income generating activities. The income generating activities include both formal and informal activities. Some labor data will be included in annual enterprise and household surveys. The 2005 population census will provide district-level data on employment, jobs and economic activity of the labor force. Labor statistics (labor force participation in the past 7 days) will therefore be a part of regular survey planning of the National Statistical Center.

*The national Statistical Center requires human resource to improve the labor statistic program. That program includes annual urban labor market surveys and improvement of labor sections in the household survey questionnaire. This labor section should provide data to analyze labor market conditions, labor market trends and estimating labor force.*

### 4.1.3 Educational statistics

Currently, UNESCO is a leading international organization which give high emphasis on education, science and culture. This organization is responsible for handbooks and classifications of educational and cultural statistics. Currently, there are four major educational statistical sources:

- Annual national school surveys (occasionally, there are supplementary surveys on specific matters)
- Household surveys
- Population and housing censuses
- Administrative data

These educational data sources cannot be clearly separated. At the same time, they also show different characteristics of each section of the data collection system but they complement one another in the system.

Educational statistics are collected and compiled by the Ministry of Education. The responsibility of National Statistical Center is to conduct, based on its own system, the full-coverage surveys and sample surveys in order to produce statistics concerning school enrollments or general characteristics of the population including adult population who are already out of school. This system makes it possible to relate educational attainment of the population to other social characteristics such as employment, income, consumption, living conditions, cultures, and various activities.

Population censuses will form a basis for various statistical reports and tables of educational characteristics of the population at the national, provincial and district levels. Data on school completion and school enrollments are highly crucial. Literacy of the population is of course an important issue but is better measured in sample surveys.

In addition to population censuses, the the 3<sup>rd</sup> Lao household expenditure and consumption surveys included a large education module in order to furnish analysis of poverty reduction. The module included literacy among household members, education

attainment for each person, expenses on education during the past 12 months, school attendance over the past 12 months, distance to school, textbooks and other..

Ministry of Education is responsible for constructing and disseminating indices of educational system development indicators such as school enrollments, school attendance registrations, dropping out rate, number of students, number of teachers, number of classrooms. This statistics is not only for compiling data for each period, but also for projections.

National Statistical Center is responsible for coordination of the educational statistical system base on its official role and function. In the future, National Statistical Center and Ministry of Education will pay due efforts in utilizing limited resources for building databases of educational characteristics of the population base on the data from population surveys and others particularly indicator indices on education which are part of major national indicator indices. Millennium development goals will also be monitored.

#### **4.1.4 Public health statistics**

Public health statistical system is based on administrative reports, population censuses, social and economic surveys, and specific public health surveys. The data collected from reports are rather incomplete and of low quality. Currently, there is no exact plan on how public health data collection should be improved. In recent years, there have been some surveys designed specifically for collecting health data such as the 2000 fertility survey (emphasizing population matters).

Fertility, pregnancy and child care, child health, birth control, and knowledge on AIDS and social indicator surveys with the special emphasis on child health care have been the contents of two specialized surveys. The national health survey of 2000 was related to the living conditions, sources of income and food, water supply and sanitation, iodine salt intake, education, child labor, injuries, serious illness, malarias, maternal and infant health, food habits, children under five years old, disease prevention, anthropometry, and others. The LECS of NSC collects out-of pocket spending on health care and the 2002/2003 survey collected health condition data, disease treatments inside and outside hospital, and payments for consultation, treatments and medicines. Anthropometric measurements of children under five years old were also included.

The national health survey may be a good vehicle to collect data from household members on health problems. Currently there are considerable duplications among health surveys, as well as between specialized health surveys and multipurpose household surveys. This problem will remain to be an important strategic problem for future surveys. Public Health Ministry is responsible for the planning, design and analysis of national health surveys.

*The National Statistical Center is responsible for coordinating public health statistics. A significant portion of public health statistics comes from population and housing censuses, specific health surveys or Lao household expenditure and consumption surveys (LECS).*

#### **4.1.5. Culture statistics**

Culture statistics refers to books, newspapers, magazines, news broadcasting stations, radio stations, artist groups, national culture and historical sites. Data collection is based on reports from the grass root. Up to now, there are only annual reports, but no quarterly reports are available. Ministry of Information and Culture does not regularly collect these data. *There is an urgent need for designing a comprehensive data collection system as well as developing a registration system or conducting surveys.*

#### **4.1.6 Statistics on disable people**

So far, there has not been any formal system for regularly collecting the data on disable people. There may be some data collected by the Ministry of Labor and Social Welfares, and Center for Disable People of the Ministry of Public Health. In 1994, National Statistical Center conducted a sample survey on social indicator indices including disability data.

*In the future, a disability statistics reporting system or surveys must be developed in order to form an internationally acceptable disability data bank. The 2005 population and housing census, which included number of disabilities, will be an important source for this data bank.*

#### **4.1.7 Poverty statistics**

Poverty reduction is an ultimate goal of the socio-economic development policy. Therefore, data and information which can be used for monitoring poverty reduction progress constitute an important issue in statistical work plan. Poverty data can be obtained from three sources. The first source is the village-level statistics, which is an attempt to measure poverty in each year using accepted principles or definitions. The first round data collection from village heads was conducted in 2001/2002 according to Decree no. 10/PM. However, data quality and transparency need to receive due consideration in future data collections.

The Lao household expenditure and consumption survey (LECS) is designed to collect data on various dimensions of poverty in Lao PDR, and to provide quantitative data on poverty ratio and poverty gap. The level of poverty can generally be observed from income and expenditure levels, ill health and lack of healthcare facilities, poor access to education, gender gap, insecurity, subjection to disasters, poor human rights, and social exclusion.

Quantitative poverty data need to be complemented by participatory research approach.

Data on household income, expenditure and consumption constitute an important output from the national statistical system. These data are in high social demand in order to evaluate living conditions, poverty ratio, spending and consumption patterns. For the national accounts it is the only source available for estimating private consumption. In addition, measures of expenditure pattern form the basket on which consumer price index is compiled. These data can only be obtained from surveys which are rather costly.

National Statistical Center, through its coordinating network, is the regular supplier of data and information to the government for monitoring and evaluating poverty reduction progress. There are other statistics, however, which can reflect poverty issues. These include surveys on labor, wages, agricultural commodity prices and agricultural productivity, informal household activities and others. Poverty and living condition data for Lao people are an important component of the entire statistical system.

*To meet the social demand for the data on poverty dynamics in Lao P.D.R., the National Statistical Center needs to conduct general and household surveys as well as collecting the data from the village-level statistical books and participating in qualitative data collections. National Statistical Center, through the coordinating network of the national statistical system, needs to work with other sectors and the Committee for National Growth and Poverty Eradication Strategy (NGPES). In order to select indicators and monitoring mechanism, NSC has proposed concepts of monitoring and evaluating the implementation of the National Growth and Poverty Eradication Strategy.*

#### **4.1.8 Gender statistics**

Gender statistics program is not only aimed at collecting statistics on gender issues, but it has other activities for improving the understanding gender issues in all social sectors. Those activities include holding meetings, seminars and congresses, as well as dispatching colorful sign boards, leaflets and pamphlets. General advertisement is also shown on internet. Gender statistic issues in many countries receive supports from women unions.

Guidance for implementing national statistics on gender issues has been improved in order to link the gender issues strategy with implementation plans in each ministry, organization and mass media. The development of such national plan will be supervised and cooperated by the National Committee for Advancement of Women of Lao P.D.R. (NCAW-Lao).

Through supports and cooperation from government and non-governmental organizations, gender issues topics have been developed. Currently, there are more than 100 gender indicators available.

*National Statistical Center will continue working on gender issues statistics for fostering monitoring capacity on the development of all aspects of gender issues. This work will be conducted in cooperation with Lao Women Union, and it will promote awareness on gender issues in all sectors.*

#### **4.1.9 Statistics of accidents, criminal and court cases**

Statistics of accidents, criminal and court cases need to be collected for use by the government in planning security, ordinance, justice and integrity issues in society. These issues commonly occur in any social and economic system, and in any locations including roads and natural vicinity.

Data and statistics of this sector reflect situations in the past and aim to improve social order through preventing unlawful acts, training the general population in the rule of law.

To make this subject matter statistics available, the responsible ministries need to develop its own statistical strategy based on the data reporting system from grassroots as well as to seek resources for conducting surveys. By doing so, the sector can have its own data bank. In conducting surveys, there is a need for cooperation between National Statistical Center, Ministry of Interior, Courts, Ministry of Justice, and Ministry of Communications, Transport, Post and Construction.

*Statistics of accidents, criminal and court cases may be diverse in grassroot, organizations and local authorities, and there has not been any data compiled to the national level. There is a need to develop both the organizational structure and a data collection system within the Ministry of Interior, Ministry of Justice and Courts. All the organizations concerned need to develop their detailed strategies for the period from now till 2010.*

## **4.2 Economic statistics system**

### **4.2.1 National accounts system**

The National Statistical Center uses the 1993 national accounts system (SNA 93) as the basis for constructing and developing the current national accounts of Laos. The aim is to make the system of national accounts effective in being the coordinating vehicle for economic statistics; i.e., for producing macroeconomic indicators, data source for research on the national economics, reference in projections of national macroeconomic indicators and the overall development of the economic system, as well as for use in the regional and global comparisons. However, the system of national accounts in Lao P.D.R. is still not clear and complete. Some definitions and specifications are still made of some mixture between the old national account system (the 1968 system) and the new system (the 1993 system). Implementation capability is still weak, and the ability to use and supply the data is still limited. Currently, only some basic indicators, particularly gross domestic product are estimated and used.

The estimation of gross domestic product in recent years has been very simple, being based on the reporting system, whose data quality, coverage and contents are not in accordance with the scientific principles of the national accounts. The data required need to be measured in a monetary unit and cover all sectors. Therefore, improvement of the national account system is urgently needed.

The statistics in the system of national accounts are from enterprises, households, and government and based on surveys or administrative reports. The major needs of the system of national accounts are production data collected from enterprises and households, international trade statistics, and fiscal data of the government. Other important statistics are statistics of household consumption and expenditure, investment data by types and sectors including private and public investments.

#### **4.2.2 National account statistics and supporting statistics**

The system of national accounts is the coordinating vehicle for economic statistics and provides clear instructions what national economic statistics should encompass. The system needs to use data from various sources. Among those, two surveys such as annual enterprise and household surveys are the main sources because they can provide data on producers' income and expenditure, and consumption and expenditure of households. The complete system of national accounts also requires data on government revenue and

expenditure, monetary and banking data, international trade and investments as well as the production data from other sectors.

To meet the above objectives, the following improvements are required:

1. improve knowledge and skills of statisticians, especially those on economic statistics and national accounts
2. From now to 2007, 9 personnel need to be trained on national accounts, and this number will be increased to 12 in 2010
3. All stakeholders, particularly suppliers and users of data need to participate and take responsibility in developing the system
4. There must be strict principles and rules in data collections including both the persons who conduct surveys and respondents to the survey questions
5. The surveyed data must be examined and scientifically adjusted, and the data must be accompanied by detailed documentation, important for ensuring good data quality

The data from the reports of each sector must be further improved. The improvements needed include timeliness. The reported data need to be expressed in a monetary unit and accompanied by a detailed documentation compiled by each sector such as agriculture, forestry and fisheries, industries and mining, processing industries, international trade, and others. National Statistical Center would like to see substantial improvements in various statistical systems which are critically crucial for compiling and calculating national accounts, in particular for:

- Agricultural production statistics (Section 4.4.1)
- Quarterly and annual industrial statistics collected from enterprise surveys which cover non-agricultural enterprises
- Access to fiscal and monetary data of central and local governments based on government fiscal data and annual financial reports including additional fiscal institutions and foreign capital sources as specified in the format of the 1993 system of national accounts (SNA93) and the international financial system of International Monetary Fund
- Timely supply of international trade statistics from Customs Department

In general, based on the requirements of the national account computation, the main statistics required include the following variables:

- The number of enterprises in the sectors covered by the survey
- Number of labor employed by economic sectors
- Wages and compensation provided to employees which may be paid in cash, in kinds or others
- Total income/production value from the main and supplementary activities of each sector
- Intermediate goods (raw materials used in production)
- Value added which can be used in calculation, the contribution of each sector in the calculation of gross domestic product (GDP)
- Stocks and inventory values
- Fixed capital value (investments, loss, depreciation which are needed for calculating capital accumulation)

The important issue regarding data quality is the improvement of the data on enterprise registrations comprising all engaged in enterprise operations but excluding household enterprises<sup>6</sup>. Sample surveys based on enterprise registration will be effective and have high quality if they are based on enterprise size. Quarterly and annual enterprise surveys can provide various indicators necessary for the enterprise sector, while household surveys provide the data on household enterprises and agricultural, forestry and fishery activities.

Generally, the above surveys have been conducted since 2003. However, enterprise registration quality is still low in terms of both scope and actuality. Furthermore, there is no mechanism for regularly monitoring changes in registrations. At the same time, there is a problem concerning knowledge or definitions related to enterprise units and local enterprise units.(establishments)

*Ten National Statistical Center, through cooperation with other sectors within the system, will continue to conduct small-scale sample surveys such as high quality enterprise and household surveys in order to obtain annual and quarterly estimates for the national account, and to be used as a basis for macro-economic policy-making.*

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<sup>6</sup> But include households running quasi-cooperations, i.e. the size and way of operation is similar to other enterprises

*National Statistical Center hopes to construct and improve the enterprise registration system, and would like to see improvement in all other sectors.*

The 1993 system of national accounts suggests that the construction of the national account involves making calculation and tabulation of the supply and demand table and the integration system of all economic accounts. The integrated account of all accounts is called the center of the calculation scope. In addition, it also can widen the calculation scope such as constructing the system of accounting matrix or satellite accounts, social accounting matrix and regional accounts.

*National Statistical Center will need to make a new base year for re-estimating GDP by activities and sectors as well as estimating GDP from the expenditure standpoint. National Statistical Center will make a supply-demand table in order to adjust data consistency. The center will give importance to the development and improvement of macroeconomic indicators and quarterly GDP estimates. Furthermore, the center will also begin to construct an input-output (I/O) table..*

### **4.2.3 Prices and price index statistics**

Price statistics include consumer price index (CPI), producer price index (PPI), and building material price index (BMPI). To provide complete data to the national accounting, National Statistical Center has to construct producer price index for agriculture, mining and international trade price indices for goods and services.

Consumer price index is compiled and calculated monthly based on a consumption basket compiled from the Lao household expenditure and consumption surveys (LECS). This consumption basket is adjusted every 5 year when the LeCS has been processed. Producer price indices for manufactured products are calculated quarterly starting from the first quarter of 2003. The data used for this calculation come from the enterprise survey. Producer price index for main agriculture produce will be compiled from the annual household surveys.

A building material price index on a biannual basis was started in late 2004 covering two sectors such as residential and non-residential construction sectors. The data will be collected within Vientiane Capital and will be adjusted periodically as appropriate.

Price indices related to international trade are also needed, but National Statistical Center concludes that these indices will not be available in the next 10 years. Nonetheless, at least price data of some exporting products will be collected through the producer price index surveys.

*National Statistical Center will continue to improve the consumer price index using the current available procedure. For updating the consumption basket, the National Statistical Center will conduct the Lao household expenditure and consumption survey every 5 years.*

*National Statistical Center will consider changing the basket for consumer price index to not only include expenditure by also self- consumption of goods and services.*

*National Statistical Center will improve producer price index for the processing industry, construct producer price index for agriculture and mining in cooperation with the sectors concerned.*

*National Statistical center will continue to improve building material price index and will try to extend this index to cover building material prices in other provinces.*

#### ***4.4 Subject matter statistics supporting the national accounts***

##### **4.4.1 Agricultural, forestry and fishery statistics**

According to the regular plan, the annual household survey is designed to provide data required by the national accounting and other users, but this survey cannot provide all the data required. Normally, these data have to be provided by the Ministry of Agriculture and Forestry. All the data and information from the reports of the Ministry of Agriculture and Forestry could be used if the ministry adopted “the survey textbook approach” for the statistics in combination with FAO handbook on the national agricultural survey, sample surveys and handbook on the agricultural sector account.

National Statistical Center and Ministry of Agriculture and Forestry worked together in conducting the national agricultural census in 1998/99. This same survey may be carried out every 10 years and may include an updating of holdings in mid-year of censuses to re-base area statistics and the livestock numbers.. All these sources combined are necessary for constructing a good agricultural and livestock database. All agricultural surveys are aimed at obtaining the data needed for making detailed planning in the way similar to the population and living condition survey. First, there must be a registration of agricultural households or holdings in order to identify the total number of households engaged in agriculture. Thereafter, detailed information on each agricultural household can be collected. The major data collected included in censuses are agricultural land area and the area left unused, rearing of each livestock type, farmhouses, equipment storage and other data (labor, planting materials, chemical fertilizer and straws). The most useful outcome for the management of the agricultural policy of Lao P.D.R. received from the national agricultural census would be a central register of agricultural holdings that is needed for many purposes

In addition, annual agricultural survey statistics must generally include:

- planting area by type of crop
- seasonal data for each year (two seasons per year) regarding harvested area and output by crop type (including industrial crops)
- The number of livestock and poultry by type, production and own consumption
- Fish production
- Agricultural producer prices compiled biannually
- State-owned and private agricultural businesses (pig and chicken farms)
- Investments
- Other agricultural statistics which are required for policy-making

Frequency of the agricultural survey is a strategic problem for National Statistical Center and Ministry of Agriculture and Forestry to consider. Other parts are based on the development of short-term agricultural statistics which can be used as indicators of seasonal, 6-monthly and yearly national accounts. Generally, agriculture censuses can be used to generate cost-effective sample allocation of villages, which is proportional to the size of agricultural operation measured as agricultural land use.

Agricultural data can be constructed from various sources including administrative reports and surveys. There are tight linkages between agricultural production statistics and

the multipurpose household surveys (Lecs) and the annual household surveys conducted by National Statistical Center in cooperation with the organizations within its vertical and horizontal organizational network. The experience from two conducted annual household surveys of rather limited size is that agricultural production in both value and quantity can be fairly well estimated. In fact, agricultural households are engaged in various activities some of which are agricultural forestry and fishery activities. Other activities include handicrafts and food processing. The household surveys aim to collect data which are as complete as possible in order to estimate value added of the agricultural sector.

Agricultural data can be collected from the village-level statistics book. For estimates of number of households and people engaged in agriculture and fishery and number of employed in the sector, the population census is an important source of information.

The current concepts of National Statistical Center and the survey plan provide sufficient opportunities for comprehensive analysis.

It is the opinion of the NSC that the present surveys provide a wide range of analysis opportunities that should be fully exploited. Agriculture statisticians should use these surveys to estimate e.g. the value added for farms as well as to estimate production of small crops such as vegetables and fruits by also looking at the consumption estimates.

Commercial crops such as coffee and cassew-nuts have to go through certain processing steps before they can be marketable products. Since agricultural products that have to be processed at the factory such as groundnuts and grains have to be weighed before packing for exports, the factory may be the best point at which the total output is checked. Another example is timber. The quantity of this product can be best determined if the measurement is done at sawmills. The export and import volumes can also be used for calculating timber output. Fishery output can be best measured in a household survey.

*The National Statistical Center is prepared to conduct agricultural censues which is consistent with international standards and guidance and cooperation with the Ministry of Agriculture and Forestry.*

*The National Statistical Center is prepared to cooperate with the Ministry of Agriculture and Forestry in improving the current reporting system which can supply basic data for the national accounting.*

*The National Statistical Center will use the census and the household survey approach to estimate the output of the sector and is willing to extend it to reflect other information needs..*

#### **4.4.2 Statistics mining and manufacturing industries**

The Ministry of Industries and Handicrafts has conducted two small and medium industry surveys, one in 1994 and the other in 1999. But, the ministry could not properly maintain its database. At the moment, the mining and industrial statistics are based on the reporting system of the Ministry of Industries and Handicrafts, but the regular reporting system include only companies and factories which are under its control. Data on industries that belong to other ministry cannot be properly collected and compiled by the Ministry. Data collection thus relies mainly on the reporting system. Data compilation using the monthly and half-yearly reports from provinces is complicated because of its small organizational structure. There are only few statisticians in the Ministry of Industries and Handicrafts. Most Provincial Industries Departments have only one statistician, and some departments have no statistician at all.

The Ministry of Industries and Handicrafts has not yet developed a strategy to improve the collection of industrial statistics. Currently, the ministry has can be linked with the central and southern parts on intranet. But this service is not available for the northern part. Limited financial resource is the major cause of incomplete intranet coverage. This is also the reason why industrial surveys or industrial data collection have not been successful. From now on, there is necessary to improve the statistics section at the ministry, province, districts and in the industrial production units. This improvement includes data collection procedures, six-monthly data compilation, as well as constructing databases of industries, handicrafts and mining. The business unit surveys of NSC may be used in cooperation with the industrial statistics obtained from the reporting system of the Ministry of Industries and Handicrafts. The ministry needs to spend sufficient effort in inviting both domestic and foreign funds for effectively implementing its statistical system. The aim is to achieve a sustainable industrial statistical system.

#### **4.4.3 Construction statistics**

Construction is important economic sector. Residential buildings, schools, hospitals, factories and companies, weirs and irrigation canals, bridges, roads and others are some

products of this sector. The construction statistics need to be collected and compiled every six months or annually.

The production of the construction sector are included in the calculation of the industrial sector's gross domestic product. There are three construction statistics sources such as government investment, investments of companies, state-owned enterprises and private enterprises, and household investment. Government investment relies on the reporting system for the investment of the State, Ministry of Finance and Committee for Planning and Investment or compiling the construction investment statistics of the State and all construction companies. Nonetheless, the data obtained from this reporting system are very limited and insufficient for constructing the national account as required by the new national accounting system (SNA93). The investment data by investment type and on depreciation cannot meet the requirement of the current system of national accounts. State and private factory investment data are compiled from business surveys which were commenced in 2002. Household investment data are from the annual household surveys.

*The National Statistical Center will continue conducting regularly business and household surveys. At the same time, the center will work in cooperation with Ministry of Communications, Transport, Post and Construction and Ministry of Finance in order to construct a system for collecting the data on government investments and to develop deflators for these investments. These data will form a database which can be used in calculating gross domestic product (GDP).*

#### **4.4.4 Communications and transport statistics**

Statistics of the communications and transport are related with the transportation of commodities, passengers, documents, signal transmission and others. These involve enormous investments in infrastructure, roads, airports, ports, stations, post offices, networks, and others. If one considers the need for these investments, he/she can observe that investments in this sector are still limited. The government considers it urgent to construct detailed statistics for this sector. In addition to infrastructure, the systems use (rolling) equipment (locomotives, wagons, vehicles of various kinds, aircraft and ships). Maintenance and lifespan determine the system capacity and the above mentioned project requires enormous funds.

Transportation network can be measured in terms of road length in kilometers. Gasoline pipes are also measured in kilometers. Others have different units such as surface and weight capacity (roads), electricity usage and non-electricity usage (railways), the

number of ports, front-end loaders, and commodity storages (ports). Communication networks can be measured in terms of the numbers of post offices, registered telephone and fax numbers, network stations, circuits network system, internet networks, and others.

Transport statistics can be collected from the transportation system, communication network and other sources such as international trade statistics, commodity shipment records. The majority are road transport statistics. Data compilation, reporting and maintenance must rely on computers. Only in this way, can the sector's database can be constructed and maintained.

Communications, transport and post statistics can be divided into different indicator groups as follows:

- Transportation network data
- The numbers of vehicles, trucks, passenger cars, boards, airplanes, and others
- Volume of commodities shipped and the number of passengers served
- Shipments of commodities and passengers (tons, kilometers, tons/kilometer, persons/kilometer)
- Post offices and telephones (number of telephone portholes, telephone centers and mobile phones), telegram service per minute. Data collection from shipping enterprises is based on the regular reporting steps. In the future, there must be a clear distinction between the reported data and the surveyed data. Communication network and vehicle statistics are from the reporting system, while the shipping enterprise statistics will come from sample surveys.
- A vehicle registration center is an important information source for estimating consumption and investments in vehicles including development of energy statistic.

*Responsible statistics organizations are required to continue to develop this sector's statistics. The two data sources, the reporting system and sample surveys need integration..*

#### **4.4.5 Trade (domestic and international trade) and balance of payment statistics**

Domestic trade statistics rely on the reporting system in the same way as statistics of other sectors. The statistical unit of Ministry of Commerce has frequently changed its staff. That constitutes a major reason why the statistics of this commerce sector are poorer compared with the statistics of other sectors. Perhaps, the data are sufficiently available in other sectors, but there is no single compiling system for gathering those data. Data collection and computation systems at local Commerce Departments are still poorly developed, and there is no one can take care of this task on a regular basis. At this stage, there are not any six-monthly domestic trade statistics that need to be used in calculating gross domestic product (GDP).

*The National Statistical Center will cooperate with and provide support to the Ministry of Commerce in constructing a domestic trade data collection and compilation system. Through this cooperation and support, Ministry of Commerce needs to make its statistical work plan and construct its database which is needed for calculating gross domestic product. In the future, these data may be taken from six-monthly and annual business surveys of the National Statistical Center.*

The Customs Department of the Ministry of Finance has to be responsible for collecting actual import and export data. The National Statistical Center is responsible for summarizing and distributing the data through its data dissemination system. The data from Customs Department together with the electricity import-export data are data which have not been adjusted for unofficially traded commodities such as border trade and underground trade.

The international trade statistics need to be improved in three major aspects such as their quality, completeness and accuracy. To improve the quality, the following actions have to be taken:

- The data from the Customs Departments must be received electronically and timely
- The data should be reported monthly using statistical technique in validation of raw data
- The data must be extended to cover other components that are currently left out of the system

The data dissemination by the Customs Department must be done in such a way to ensure that National Statistical Center can receive the data electronically.

Bank of Lao P.D.R. is responsible for the collection, compilation, analysis and dissemination of balance of payment statistics using IMF's balance of payment handbooks and textbooks. National Statistical Center will continue to cooperate with Bank of Lao P.D.R. in collecting international trade statistics, as well as in conducting enterprise and household surveys in order to improve the balance of payment statistics.

*Through cooperation with the sectors concerned, National Statistical Center is prepared to improve the quality and timeliness of the statistics on international trade, domestic trade, tourism and services. The center will also do its best in disseminating international trade statistics once every six months for providing short-term trade statistics.*

#### **4.4.6 Tourism and service statistics**

Tourism statistics are based on the reports from the national tourism authority. The reports provide tourist statistics in different types such as international and regional tourists, subject-specific tourists and other types of tourists. The tourist statistics are also categorized by countries. Other statistics include numbers of hotels, restaurants, entertainment places and tourist resorts inside the country. In addition, the national tourism authority conducts annual surveys for collecting the data on duration of stay and expenditure by the tourists divided into different types and by country of residence.

*The national tourism authority has planned to improve its tourism statistics. Until recent years, the report has focused on only counting the number of foreign tourists but the number of Lao tourists has not been included in the reporting system. Thus, in the future, statistical scope must be extended to cover the number of Lao tourists who visit various sites within the country. Additionally, the national tourism authority also has a plan to develop an accounting network in cooperation with the Great Mekong Sub-region.*

*This will be an important step as the authority can provide information on its expansion and contribution to the national economy.*

*National Statistical Center will continue to provide its cooperation and support to the national tourism authority so that the latter can set up its tourism statistics improvement plan, and to link the national tourism account with the regional tourism network. The center will also support the national tourism authority in utilizing the data from the Lao household expenditure and consumption surveys as well as from the annual and six-monthly enterprise and household surveys conducted by National Statistical Center,*

## **4.5 Other statistics**

### **4.5.1 Statistics on houses and buildings**

Statistics of houses and buildings are required in all countries for local planning purposes. Therefore, almost all countries in the world include both population and housing in the same census. In Lao P.D.R., there was such censuses in 1995 and 2005. Since the housing stock is stationary and renewed and increased with only a few percentage points per year, the customary intercensal period of ten years is not a great disadvantage, particularly since changes in the housing stock can be followed at the local level on the basis of statistics on housing construction and housing conditions by sample surveys.

Housing is included in the Lao household expenditure and consumption surveys (LECS) and the reproductive health surveys. The statistics are general housing indicators: house type, ownership, room number, household size, kitchen, lavatory, access to pipe water, electricity, drainage, durable assets and others.

One of the purposes of the annual household surveys is to measure housing construction. These statistics can also be obtained by conducting a survey specifically designed to collect household indicators or they can be incorporated into a general social and economic survey (project starting and finishing time, type of work, number of dwellings and storeys, size of lot, building surface area, floor area, non-residential area, type of constructor, costs, and others).

*National Statistical Center will continue trying its best in utilizing the data from various surveys in order to compile the housing and building statistics until the next population and housing survey.*

#### **4.5.2 Environment statistics**

Unlike the statistics of other sectors, environment and natural resource statistics are diverse, making it difficult to collect and produce. Environment statistics are an emerging area in the general statistical system, and they can be produced in different ways. Data collection procedure has been constantly developed. Under the environmental conditions in Lao P.D.R., which are different from those in other countries, the National Statistical Center has attempted to build and develop environment and natural resource statistics for Lao P.D.R. However, uniform procedures have not yet been developed.

In developing the environment and natural resource statistics, National Statistical Center will cooperate with sectors concerned in making handbooks or guiding documents. Such work will involve international cooperation particularly the cooperation with advanced countries that have experiences in this field. Through this cooperation, lessons from advanced countries can be adjusted to suit the situation of our country. Environmental problems in our country include deforestation, land degradation, water pollution, air pollution, noise pollution, rapid population growth, lowland and upland production, use of chemical fertilizer, floods, and waste water discharges.

Data and information reflecting environmental conditions are generally collected by regular field observations and measurements (surveys). These surveys are conducted through the environmental monitoring program. These activities are normally executed by the Science, Technology and Environment Organization (STENO) and the Mekong River Committee, and conducted by research institutes because of their technical requirements, field equipment, and laboratories. The first role of National Statistical Center is to select statistical components in order to ensure the appropriateness of the indicators produced. Appropriate indicators need to reflect common understanding of the Lao people as well as to be consistent with sustainable development. The second role is to disseminate the project monitoring outcome along with the dissemination of its own statistics.

The common aim of the government and donors is to produce a large quantity of reliable environmental and natural resource statistics for Lao P.D.R. The main statistics are the annual forest cover area, deforestation, air pollution particularly carbon dioxide emission, water resources and water pollution, waste management and land use.

*National Statistical Center has to coordinate with the STENO, Mekong River Committee and other sectors concerned in producing environmental statistics in order to comprehensively carry out the work plan that is consistent with international standards and guidelines.*

**Box 3: Data from the reporting system compared with survey data**

The general picture of the statistical sector in Lao P.D.R. is that it is based on administrative and statistical reporting. The main objective of this reporting system is to monitor the implementation of the economic development plan. The data are reported from village to the central government via district and provincial authorities. Generally, the district officials directly collect the data from villages. The district officials will summarize the data collected from villages before sending them to the provincial authorities, and the data encapsulating process continues until the data have reached the central authority. The central government will have the data from provincial and district authorities. Theoretically, the data reporting system ends up with summarized figures but detailed information can be obtained from the provincial and district levels. Nonetheless, the summarized numbers do not guarantee absence of double counting problems.

Statisticians and international experts have analyzed the data reporting system and found that the quality of the system is sub-optimal. This problem arises to the large extent from the heavy dependence on the planning system which has not incorporated standard statistical principles and international concepts. Observing this problem, the statisticians suggest that the Lao statistical reporting system has to employ statistical procedures such as technical design based on statistical principles, the data have to be clearly explained (using metadata), and each survey must be carefully designed.

For any data collection method applied the most difficult problem is lack of resources for field activities. Some data have to be collected twice, and some resources must be given to villagers for them to conduct enterprise and agriculture holding registrations. These registrations are important for effective sample surveys.

The reporting system is the basis for decision making and the interest in the sample survey outcomes are still weak at ministries. This problem may be due to limited knowledge and understanding of a high quality survey. Furthermore, the two data collection methods sometimes also compete against each other. Nonetheless, the Lao household expenditure and consumption survey has been accepted and applied widely. The agricultural statistical work has also been praised.

National Statistical Center as the coordinator of the national statistical system hopes to see and cooperate with sectors concerned in discussing on how to integrate reporting and survey data and how to combine the enterprise and household surveys. The requirements of the new system of national accounts (SNA 1993) must make distinction between commercial production by companies and commercial plus non-commercial production by households. Company surveys can be conducted separately and need to be sampled. Sample selection is based on the proportion of size. Sample surveys are one way of effectively utilizing limited resources. The reporting system cannot categorize the data to meet technical requirements, particularly of calculating GDP based on the new system of national accounts. Generally, the data received through the reporting system provide only some quantitative aspects of statistics and they are rarely used. They cannot be used for calculating all the indicators required by each sector. They can only be sufficient for enterprise registration. Household enterprises must be included in regular annual household surveys. Household data collection needs to employ appropriate techniques.

Quantitative measures are, however, useful for some activities of the agricultural sector. The reporting system seems to sufficient in terms of quantitative data (but values are missing), and agriculture seems to be a suitable area to find out how it can be improved. Two changes of the reporting system can be tested. The first one is to collect and only summarize all the necessary data at the village level and sending these village data to the central government via the usual steps of the reporting system. In the agricultural sector, those data may include planting area, harvested area, outputs by major crops, and the number of livestock. This means that at some stage such as the provincial level, the data need to be entered and maintained in provincial databases. These databases can then be electronically transferred to other sectors or levels. This method will make things easier for the central government as well as National Statistical Center to examine, analyze the data, find and impute missing data and correct mistakes in calculations. The data can also be compared with the data from other sources in terms of their quality.

The next agricultural sample survey needs to avoid or first of all must be implemented if alteration or improvement of the existing reporting system is not possible as previously explained. This is done through comparing the data sample from the reporting system which is deemed to be inconsistent with the data from the Lao household expenditure and consumption survey.

## **5. Summary of the statistical development strategy: 2006-2010**

The objective is to develop the national statistical system which can supply complete and high quality official statistics to meet the demand of both the domestic and international users.

To achieve the objectives of this strategy and to be able to develop the national statistical system along the desired direction, National Statistical Center strongly hopes that this strategy will be a good guidance and be able to attract technical and financial supports from various organizations. The supports are necessary for a sustainable development of the system.

The key statistical system development measures emphasize the following issues:

(1) Institutional improvement, development of human resources through building technical and managerial capacity of the staff at all levels of the national statistical system. The aim is to make the statistical organizational structure capable, effective, and staffed with knowledgeable and skillful personnel. The system needs to be non-complicated and managed for regularly producing official statistics.

(2) The development of statistical infrastructure including information technology (IT) in the statistical system. Such infrastructure is necessary for effective production and timely dissemination of the official statistics. The IT development plan includes installation schedule, timetable, and maintenance plan.

(3) Strengthening the cooperation between producers and users of statistics in order to improve the overall cooperation within the national statistical system. That is, to promote integration and linkages between National Statistical Center and producers-users of the statistics according to the guidelines given in the Prime Minister's Decree No. 140/PM.

(4) Developing an official statistics dissemination system by constructing data dissemination program for National Statistical Center and the metadata document which describes the detailed data preparation procedures and data sources. The metadata document needs to be based on the GDDS system. The official statistics dissemination must be capable of regularly disseminating the data to meet regular users' demand and to attract new users.

(5) Developing legal documents on official statistics. That is, to develop the Prime Ministerial Decree 140/PM into the statistics law.

The major activities which need to be carried out by the National Statistical Center in cooperation with the other organizations within the national statistical system are explained in Matrix 1. This matrix emphasizes the scope and necessary data that must be effectively developed in the national statistical system, the production of each statistics type including division of labor and participation of all stakeholders.

Staff requirement: To make National Statistical Center as well as the national statistical system a strong and effective organization or system, the organization or the entire system should be staffed with knowledgeable and skillful personnel who have non-complicated work plans and are capable for managing the day-to-day production and dissemination of official statistics. That is, there must be capable personnel in all levels of the national statistical system. Specifically speaking, by 2010, the national statistical system personnel should possess technical knowledge and skills as well as creativity/flexibility. Therefore, it is necessary to place as the first priority the recruitment of personnel who have economics and statistics knowledge.

According to the preliminary estimate which is based on positions and overall requirements at all levels, the number of staff must be increased every year. By 2010, the number of personnel at each level of the national statistical system must be as follows:

1. Currently, National Statistical Center has 41 staff, and by 2010 it needs to be staffed with 100 personnel.
2. There are 39 statistical staff in all ministries at present, and by 2010 there must be 92.
3. There are 65 statistical staff in all provinces and this number needs to be increased to 93 by 2010
4. At the district level, there are currently 200 staff working on statistics, in 2010 there must be about 284 people working on statistics.

5. Departments and production units of the ministerial level and provincial departments need to have between 1 to 3 statisticians

(The detailed staff requirements from 2005 to 2010 are presented in Appendix III).

The minimum budgets required: Along with the expansion of the statistical work and staff requirements in the statistical authorities, the budget requirements also increase in order to effectively carry out the statistical system that plays the central role of the development (see Table 1: Full coverage and sample surveys for 2005-2010). However, the capacity of the national statistical system in 2005 both in terms of personnel and budget is far below the desired capacity as specified in this strategy.

This problem indicates that there is an urgent need to substantially improve the capacity of the national statistical system. Substantial budget increases which come from both the government and donors coupled with technical assistance from donors will be crucial for the development and implementation of the statistical system. Otherwise, it would be difficult to produce high quality statistics. In the worst case, basic statistical activities may not be carried out.

In a situation in which statistics are in high demand as our country is integrating actively into regional and international economies, but the national statistical system has to operate with limited number of knowledgeable and skillful personnel, this statistical development strategy also tries to specify the scope of statistics called “the minimum acceptable statistical system”. This system will be applied under circumstances of insufficient budget and staff.

The average budget requirement for effectively implementing the national statistical system is about 11.4 billion Kip per year (1 million dollars per year). The budget requirement for the “the minimum acceptable statistical system” is about 4.9 billion Kip per year or 445 thousand dollars per year (this budget excludes staff salaries and wages; see Appendix IV for details).

Monitoring and evaluation of the strategy: To monitor the implementation of the 2005-2010 statistical strategy, various indicators for both overall and specific monitoring will be produced. Some indicators which certify the implementation process, limitations/risks will also be clarified (see Matrix 1 for details). The implementation progress monitoring and evaluation will be done through the annual implementation plan. In the 2005-2008, the evaluation will be done along the evaluation plan of the 5-year cooperation project on statistics supported by SIDA through Statistics Sweden. The final evaluation of this statistical strategy implementation is expected in late 2010. This final evaluation will be conducted jointly by all the statistical authorities at all levels and other organizations concerned.

