Strategic Plan for Agricultural and Rural Statistics

2016 – 2025




Department of Planning and Cooperation,
Ministry of Agriculture and Forestry
Lao PDR

SPARS

STRATEGIC PLAN FOR AGRICULTURAL AND RURAL STATISTICS

LAO PDR

2016-2025

MINISTRY OF AGRICULTURE AND FORESTRY, LAO PDR

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TABLE OF CONTENTS

TABLE OF CONTENTS i
FOREWORD iii
ACRONYMS iv
ACKNOWLEDGEMENTS vi
EXECUTIVE SUMMARY vii
CHAPTER 1 1
BACKGROUND 1
1.1 Rationale 1
1.2 SPARS development process 2
1.3 Administrative structure of Lao PDR 3
1.4 Policy context and demand for agricultural and rural statistics 5
1.4.1 Overview of the agricultural sector in Lao PDR 5
1.4.2 Agricultural sector development strategy 6
1.4.3 National Socio-Economic Development Plans 7
1.4.4 Sustainable Development Goals 9
1.5 Framework for the collection of statistics in Lao PDR 9
1.6 Integration of agricultural and rural statistics into the NSDS 10
1.7 Action plan to improve agricultural and rural statistics 12
1.8 Key stakeholders 12
CHAPTER 2 16
EVALUATION 16
2.1 Assessment of statistics outputs 16
2.1.1 Censuses 16
2.1.2 Crop statistics 17
2.1.3 Livestock statistics 18
2.1.4 Fisheries and aquaculture statistics 19
2.1.5 Forestry statistics 19
2.1.6 Agricultural markets and prices statistics 20
2.1.7 Water and environment statistics 20
2.1.8 Food security and nutrition statistics 20
2.1.9 Rural development statistics 20
2.1.10 Other agriculture related statistics 21
2.2 Data dissemination 22
2.3 Assessment of user satisfaction and needs 23
2.4 Capacity assessment 25
2.5 SWOT analysis 28
CHAPTER 3 30
PLANNING 30
3.1 Vision and mission 31
3.2 Strategic goals and outputs 31
3.3 Implementation 32
3.3.1 Implementation arrangements 32
3.3.2 Action plan 32
3.3.3 Calendar of censuses and surveys 33
3.3.4 Data release calendar 34
3.3.5 Advocacy-communication plan 34
3.3.6 Monitoring and evaluation plan 35
3.3.7 Financing 36
REFERENCES 39

ANNEX I 41
COMPOSITION AND TERMS OF REFERENCE FOR STEERING COMMITTEE ON AGRICULTURAL AND RURAL STATISTICS 41
ANNEX II 42
COMPOSITION AND TERMS OF REFERENCE FOR TECHNICAL WORKING GROUP ON AGRICULTURAL AND RURAL STATISTICS 42
ANNEX III 43
VISION, GOALS AND TARGETS OF THE AGRICULTURE DEVELOPMENT STRATEGY 43
ANNEX IV 46
NATIONAL SOCIO-ECONOMIC DEVELOPMENT PLAN 2016-2020, OBJECTIVE, OUTCOMES AND OUTPUTS 46
ANNEX V 48
STRATEGY FOR THE DEVELOPMENT OF THE NATIONAL STATISTICS SYSTEM 2010-2020 48
ANNEX VI 52
MINIMUM SET OF CORE DATA ITEMS FOR LAO PDR 52
ANNEX VII 56
SWOT ANALYSIS OF AGRICULTURAL STATISTICS SYSTEM IN LAO PDR 56
ANNEX VIII 58
SPARS ACTION PLAN 58
ANNEX IX 64
SPARS LOGICAL FRAMEWORK 64
70
ANNEX X 71
SPARS FINANCING PLAN 71

TABLES

TABLE 1: CALENDAR OF AGRICULTURAL CENSUSES AND SURVEYS, LAO PDR 33
TABLE 2: CENTRE FOR AGRICULTURAL STATISTICS, DATA RELEASE CALENDAR 34
TABLE 3: ESTIMATED COST OF SPARS IMPLEMENTATION BY SOURCE OF FUNDS 37

FOREWORD

Lao PDR has embarked on an ambitious programme of agricultural development based on the principle of sustained growth with equity, with a view to graduating from Least Developed Country status by 2020. In the agricultural sector, the main aim is to improve food security through increased agricultural productivity, to eliminate shifting cultivation, to provide employment to the landless and those who have been re-settled, and to protect forests and reforest degraded areas. With the emphasis on further developing the agricultural sector, agricultural and rural statistics are assuming increasing importance.

The formulation of the National Strategy for the Development of Statistics, 2010-2020 (NSDS) was an important step in strengthening the foundation for the development of a sound national statistics system in Lao PDR. The NSDS is a strategic statistical planning process which provides a long-term vision for statistical development in a country and an action plan to build a comprehensive national statistics system. The NSDS for Lao PDR seeks to make available regular economic, social and environment statistics that are comprehensive, timely, reliable and transparent, and that serve the purpose of monitoring and evaluating the progress of the National Socio-Economic Development Plans. The NSDS covers statistics in all sectors, including agriculture.

Under the Statistics Law, the primary responsibility for agricultural statistics in Lao PDR rests with the Ministry of Agriculture and Forestry. The NSDS includes a number of measures to improve agricultural statistics, but it is recognized that a more detailed strategy is needed to guide the development of agricultural and rural statistics within the framework of the NSDS. The Strategic Plan for Agricultural and Rural Statistics (SPARS) for Lao PDR, presented in this document, serves that need.

The SPARS covers the ten-year period 2016 to 2025, with emphasis on the last five years of the NSDS, 2016 to 2020. A results-based management approach is used for the SPARS, with the identification of outputs and activities needed to achieve defined strategic goals for the agricultural and rural statistics system. A monitoring and evaluation system is provided. A financing strategy for improving agricultural and rural statistics is also presented.

The SPARS document has been prepared by the Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Lao Statistics Bureau and the Ministry of Agriculture and Forestry, and in consultation with all key stakeholders. I thank the international community for their support for this work.

MAF looks forward to work beginning on implementing the SPARS and is sure that this will lead to significant improvements in the quality of agricultural and rural statistics in Lao PDR.

Minister for Agriculture and Forestry

ACRONYMS

ADB	Asian Development Bank
AFD	Agence Française de Développement
AFSIS	ASEAN Food Security Information System
ARS	Action Plan for Improving Agricultural and Rural Statistics
ASEAN	Association of Southeast Asian Nations
CAS	Centre for Agricultural Statistics, Ministry of Agriculture and Forestry
CPH	Census of Population and Housing
CPI	Consumer Price Index
CSPro	Census and Survey Processing System (a software package)
DAEC	Department of Agricultural Extension and Cooperatives, Ministry of Agriculture and Forestry
DAFO	District Agriculture and Forestry Office
DALAM	Department of Agricultural Land Management, Ministry of Agriculture and Forestry
DLF	Department of Livestock and Fisheries, Ministry of Agriculture and Forestry
DOA	Department of Agriculture, Ministry of Agriculture and Forestry
DOF	Department of Forestry, Ministry of Agriculture and Forestry
DOFI	Department of Forest Inspection
DOI	Department of Irrigation, Ministry of Agriculture and Forestry
DOPC	Department of Planning and Cooperation, Ministry of Agriculture and Forestry
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agricultural Organization of the United Nations
GDP	Gross Domestic Product
GIS	Geographic Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
GS	Global Strategy to Improve Agricultural and Rural Statistics
Ha	Hectares
HS	Harmonized Commodity Description and Coding System
ICT	Information and Communication Technology
IdCA	In-depth Country Assessment
IFAD	International Fund for Agricultural Development
JICA	Japan International Cooperation Agency
Kcal	Kilocalories
KOICA	Korea International Cooperation Agency

Lao PDR	Lao People's Democratic Republic
LCA 2010/11	Lao Census of Agriculture 2010/11
LECS	Lao Expenditure and Consumption Survey
LNADA	Lao PDR National Data Archive
LSB	Lao Statistics Bureau, Ministry of Planning and Investment
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MAF	Ministry of Agriculture and Forestry
MONRE	Ministry of Environment and Natural Resources
MOIC	Ministry of Industry and Commerce
MPI	Ministry of Planning and Investment
NAFRI	National Agriculture and Forestry Research Institute, Ministry of Agriculture and Forestry
NSDS	National Strategy for the Development of Statistics
NSEDP	National Socio-Economic Development Plan
NUOL	National University of Laos
OECD	Organisation for Economic Co-operation and Development
PAFO	Provincial Agriculture and Forestry Office
PARIS21	Partnership in Statistics for Development in the 21st Century
SCA	Steering Committee on Agricultural and Rural Statistics
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SIAP	Statistical Institute for Asia and the Pacific
Sida	Swedish International Development Agency
SNA	United Nations System of National Accounts
SPARS	Strategic Plan for Agricultural and Rural Statistics
SPSS	Statistical Package for Social Sciences (a software package)
SWOT	Strengths, Weaknesses, Opportunities, Threats
TWA	Technical Working Group on Agricultural and Rural Statistics
UNDP	United Nations Development Programme
VEW	Village Extension Worker
WP	NSDS Work Programme

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EXECUTIVE SUMMARY

Background

The *Global Strategy to Improve Agricultural and Rural Statistics* (GS) is an international effort aimed at providing a framework to enable national statistical systems to produce the agricultural and rural data needed for decision making. One of the main elements of the GS is integrating agriculture into the national statistics system, and it is recommended that each country develop a *Strategic Plan for Agricultural and Rural Statistics* (SPARS) within the framework of the *National Strategy for the Development of Statistics* (NSDS). The NSDS is a strategic planning process providing countries with a guide for the long-term improvement in the quality of official statistics. The SPARS provides the agricultural and rural statistics component of the NSDS. The NSDS for Lao PDR covering the period 2010-2020 is already being implemented. The present document presents the SPARS for Lao PDR for the period 2016-2025.

The SPARS has been developed in accordance with the NSDS methodology. There were three phases in the design of the SPARS. The launching phase covered the initial preparations for the SPARS design and the establishment of the necessary administrative structures, including a steering committee and a technical working group. The assessing phase involved evaluating the current agricultural and rural statistics system and assessing the country's capacity to improve the statistics. An in-depth country assessment carried out under the GS served as the foundation of this phase. The planning phase involved illustrating the SPARS itself.

For the purpose of the SPARS, agriculture covers crops, livestock, fisheries and forestry. Agricultural and rural statistics cover agricultural production activities, as well as rural development statistics such as employment, socio-economic characteristics and access to services.

Policy context and demand for agricultural and rural data

Rice is the dominant crop in Lao PDR and is crucial to the economy and the country's food security. Cropping is becoming more diversified: maize, sugar cane, vegetables, fruit, cassava, groundnut, tobacco, coffee, rubber and sesame are other important crops. Cattle are becoming increasingly important. Pig raising is prevalent in upland areas. Many households raise a few chickens or ducks. Fishing is an important secondary activity for many households. Aquaculture is becoming increasingly important. Timber and non-timber forest products provide a wide range of subsistence needs, as well as providing a source of income.

The Government of Lao PDR has developed a ten-year strategy for the development of the agricultural sector for the period 2016 to 2025 and a vision for the sector to 2030. The vision is to ensure food security and develop an efficient and competitive agricultural sector. The goals are

to: produce a stable supply of agricultural products; ensure production of safe food in an environmentally friendly manner; and create employment and increase rural incomes.

Five-yearly *National Socio-Economic Development Plans* (NSEDPs) are formulated to guide the development of the national economy. The Eighth NSEDP for 2016-2020 continues the emphasis on economic growth and sustainable development, strengthening human resource capacity, maintaining stability and widening international cooperation in order to achieve the objective of graduating from Least Developed Country status by 2020. Agricultural and forestry elements in NSEDP 2016-2020 are based on the agricultural development strategy.

Framework for the collection of agricultural and rural statistics

The Statistics Law of Lao PDR was enacted in June 2010. The Law provides for a partially decentralized statistical system. The Lao Statistics Bureau (LSB) produces major national statistics, while each line ministry compiles statistics for its sector under guidance from LSB. In the Ministry of Agriculture and Forestry (MAF), the Centre for Agricultural Statistics (CAS) oversees all agricultural statistics, in collaboration with MAF's technical departments, provinces and districts. Most agricultural statistics are compiled using administrative reporting, with reported data being transmitted from the villages through the various administrative levels to MAF's central office.

The NSDS has seven goals, nine objectives and four strategies. Agricultural statistics activities under this framework include compiling the required indicators, harmonizing concepts and methodologies, improving data collection methodologies, conducting agricultural censuses and surveys, building staff capacity, improving coordination in data collection, and improving data dissemination. In 2013, MAF prepared an action plan to improve agricultural and rural statistics.

Capacity assessment

The NSDS for Lao PDR highlights human resource weaknesses in statistics and recommends increases in statistical staff, as well as further statistical capacity building efforts in LSB and the line ministries to upgrade skills to international standard. Staff numbers in LSB have more than doubled since 2010. Only two LSB staff work part-time on agricultural statistics.

In MAF, CAS currently has 14 staff. Most have some experience in census/survey work. All have basic computer skills; some have exposure to database, statistical analysis and mapping software. Further capacity building is needed, especially in data processing, data management, data analysis, report writing, and data dissemination. Statistics units in MAF's technical departments usually have one or two staff. Most have no formal training in statistics. Provinces and districts also have agricultural statistics staff, who also need training.

Information and communication technology (ICT) for agricultural statistics needs to be strengthened at all levels. Infrastructure to connect MAF's central office with provinces, districts and villages needs to be upgraded to improve the capacity to collect, analyze, store and share agricultural information. Internet services need to be improved. There are several on-line databases available that contain agricultural statistics, including *Lao DECIDE*. LSB also has some agricultural statistics on its website. CAS does not have a website.

Assessment of statistical methodology and data quality

The national statistics system in Lao PDR is comprehensive. LSB prepares annual national accounts, and conducts decennial censuses of population and housing and five-yearly expenditure/consumption surveys. LSB and MAF have collaborated on two agricultural censuses: in 1998/99 and 2010/11.

The administrative reporting system provides data on: planted area, harvested area, yield and production for 33 crops; number of cattle, buffaloes, pigs, goats/sheep and poultry; production of capture and culture fisheries; and seed collection, seedlings, forest area planted and reforested area. Sample survey, crop cutting and remote sensing methodologies have been tested but not implemented on an ongoing basis. No livestock production data are available.

The Government of Lao PDR acknowledges the weaknesses in the administrative reporting system. Reporting procedures and questionnaires are not standardized, statistical concepts are not clearly defined, there is no control or supervision of the data reporting, and the data lack objectivity. However, administrative reporting will continue to be the core of the agricultural statistics system in Lao PDR for some time to come because of budget and manpower shortages. Work is needed to improve the reporting system, while progressively introducing sample surveys to supplement the administrative data. Farm-gate price collections are also needed.

Agricultural statistics are published in the *Agricultural Statistics Yearbook*, released by CAS in the middle of each year. These are the only published agricultural statistics in Lao PDR. No data are made available on the Internet. A more extensive data dissemination programme is needed, including seasonal crop reports and crop forecasts.

Main elements of the SPARS for Lao PDR

The SPARS for Lao PDR has been designed to link with the national development plans. The SPARS covers the period 2016-2025, which corresponds to the ten-year period of the agricultural sector development plan. The first five years of the SPARS, 2016-2020, correspond to the period of the current NSEDP.

The SPARS has been integrated into the NSDS and the existing action plan for agricultural and rural statistics. The three SPARS strategic goals are the same as the first three NSDS strategies (one NSDS strategy is not applicable to agriculture). Also, SPARS outputs are the same as in the action plan. Sub-outputs have been defined to provide more information on the work to be carried out under the SPARS.

The vision of the SPARS is:

> *A sustainable system for agricultural and rural statistics that meets international standards, supporting informed decision making in the agricultural sector.*

The mission of the SPARS is:

> *To implement a systematic agricultural and rural statistics system that provides comprehensive, timely, transparent and reliable data using up-to-date methods for the collection, processing and*

dissemination of statistics.

The strategic goals and outputs are:

Goal 1: Improving regulation and institutional frameworks for agricultural and rural statistics.

Output 1.1. Effective coordination mechanisms among agricultural and rural statistics stakeholders.

Output 1.2. Adequate number of trained staff on agricultural and rural statistics hired.

Goal 2: |Developing statistical infrastructure for agricultural and rural statistics.

Output 2.1. Adequate training programmes developed and implemented.

Output 2.2. Adequate data collection equipment and support mechanisms available.

Goal 3: Managing and developing agricultural and rural statistics.

Output 3.1. Uniform standards, concepts and methods on agricultural and rural statistics developed and applied across all districts and government agencies.

Output 3.2. Good and appropriate data collection methods adopted.

Sub-outputs

3.2.1 Required agricultural and rural indicators are produced and additional indicators developed.
3.2.2 Sound methodology for the estimation of value added for the agricultural sector developed and implemented.
3.2.3 Improved administrative reporting system for agricultural and rural statistics implemented.
3.2.4 Master sample frame for agricultural surveys established.
3.2.5 Third agricultural census conducted and results disseminated.
3.2.6 Regular crop condition reports prepared and disseminated.
3.2.7 Improved system for crop production statistics implemented.
3.2.8 Programme of agricultural sample surveys implemented and results disseminated.
3.2.9 Statistical system for agricultural price statistics implemented.
3.2.10 Improved food balance sheets published.

Output 3.3. Data dissemination system developed and applied.

SPARS implementation

The action plan for the implementation of the SPARS showing detailed activities for the first two years (2016 and 2017), and a broad description of activities for the remaining years, is shown in Annex VIII. A calendar of censuses and surveys for agricultural and rural statistics is shown in Table 1. A data release calendar is shown in Table 2. Key elements of the action plan are:

- Reorganize statistics units in MAF to provide a more effective statistical service, and develop and implement training programmes for MAF statistical staff at all levels;
- Develop and implement an ICT plan for agricultural and rural statistics in MAF, with emphasis on improving data transfer from local to central levels;

- Develop a manual on statistical standards, concepts and methods for agricultural statistics;
- Evaluate the existing administrative reporting system for agricultural statistics, and develop and implement improved reporting mechanisms;
- Conduct the third agricultural census in 2019;
- Prepare and publish regular crop condition reports;
- Introduce regular crop cutting surveys for use in estimating rice production statistics;
- Conduct regular agricultural sample surveys to supplement data from the administrative reporting system;
- Develop and implement a system for regular agricultural prices statistics; and
- Develop and implement a data dissemination plan for agricultural and rural statistics.

The indicative cost of the SPARS implementation for the first five years (2016-2020) is 51.1 billion kips excluding salaries (see Annex X). The day-to-day running costs will be financed by the government and this will require increasing levels of government funding. External resources required over the first five years are estimated at US$ 5.3 million. This will be used for the development of new statistical methodologies, staff training and equipment. External support will also be needed for the agricultural census. The availability of funds under various international statistical capacity building programmes, such as the GS, should be explored.

A monitoring and evaluation (M&E) plan for the SPARS implementation is shown in Annex IX. CAS will have primary responsibility for implementing the SPARS. It will prepare an annual progress report, including an updated action plan and financing plan for the following year, for endorsement by the steering committee. A mid-term evaluation will be carried out in 2020, coinciding with the final evaluation of the NSDS. A final SPARS evaluation will be undertaken in 2025.

The SPARS also includes an advocacy-communication plan for agricultural and rural statistics. The inclusive approach used in the SPARS development has raised awareness of the need for the SPARS and for improving the quality of agricultural and rural statistics. Improving the range, timeliness, quality, accessibility, technical documentation and analysis of the statistics will help to promote their use. Dissemination workshops will also help in this regard.

CHAPTER 1

BACKGROUND

1.1 Rationale

In many countries, agriculture is an important contributor to the national economy, and plays a key role in food security, employment and household incomes. In these circumstances, the need for high quality agricultural and rural statistics to be generated and made available is paramount to facilitate evidence-based planning and policy making. In recent years, there has been a decline in the availability and quality of agricultural and rural statistics. The need to monitor the Millennium Development Goals (MDGs) and the emerging issues in agriculture, such as the environment, global warming, and the use of food crops for biofuels, has led to a renewed commitment by the international community on improving agricultural and rural statistics.

The *Global Strategy to Improve Agricultural and Rural Statistics* (GS) (World Bank et al, 2010)[1] is a key initiative in this regard. The GS aims to provide a framework to enable national and international statistical systems to produce the basic agricultural and rural information needed for decision making. The GS has three main pillars: (i) establishing a minimum set of core data required to meet current and emerging needs; (ii) integrating agriculture into national statistics systems; and (iii) building capacity to ensure sustainable agricultural statistics systems through governance and research.

The second pillar recommends that each country design and implement a *Strategic Plan for Agricultural and Rural Statistics* (SPARS) within the framework of the *National Strategy for the Development of Statistics* (NSDS). The NSDS is a strategic planning process being promoted by the Partnership in Statistics for Development in the 21st Century (PARIS21) and aims to provide countries with a guide for the long-term improvement in the quality of official statistics. SPARS provides a strategy for the development of the agricultural and rural statistics system as a component of the NSDS. The NSDS for Lao PDR was prepared in 2010, covering the period 2010-2020. The present document presents the SPARS for Lao PDR for the period 2016-2025.

For the purpose of the SPARS, agriculture covers crops, livestock, fisheries and forestry, and includes the economic, social and environmental dimensions of agricultural and rural development. Agricultural and rural statistics cover agricultural production activities, as well as development aspects in rural areas such as employment, socio-economic characteristics and access to services.

The need for countries to develop a SPARS arises because the coverage of agricultural and rural statistics in the NSDS is often limited. Agricultural statistics are quite weak in many countries because of the reliance on administrative reporting systems. There are often organizational weaknesses in the collection or reporting of data, in addition to duplication in data collection, methodological weaknesses, and a shortage of financial resources for censuses and

[1] See *http://www.fao.org/docrep/015/am082e/am082e00.pdf*.

sample surveys. The SPARS process aims to build on the overall statistical strategy given in the NSDS to guide the future development of agricultural and rural statistics. It aims to evaluate the existing agricultural and rural statistics system, assess data quality, identify data gaps, and determine programmes and interventions needed to improve statistics. The SPARS also helps in coordinating and financing agricultural and rural statistics development activities.

In Lao PDR, most agricultural statistics are compiled using administrative reporting systems and suffer from the weaknesses inherent in such systems. The Government of Lao PDR is aware of these shortcomings and the effect this has on agricultural planning and policy making. However, because of funding shortages, it is foreseen that administrative reporting will continue to be the basis of the agricultural statistics system in Lao PDR for some time to come, with regular sample surveys conducted to supplement, and eventually replace, data from the administrative reporting system. In these circumstances, it is important to have a long-term strategy to gradually introduce new methodologies and improve data quality. SPARS serves that purpose.

The Food and Agriculture Organization of the United Nations (FAO) has been implementing the GS in the Asia-Pacific region in partnership with the Economic and Social Commission for Asia and the Pacific (ESCAP), the Statistical Institute for Asia and the Pacific (SIAP) and the Asian Development Bank (ADB). Lao PDR was selected as a priority country for implementation of the GS. The first step was to carry out an in-depth country assessment (IdCA) of the agricultural and rural statistics system in Lao PDR (FAO, 2015a). This was completed in August 2015. The results of the IdCA provided an important input to the development of the SPARS.

The IdCA identified major areas of agricultural and rural statistics in Lao PDR needing technical assistance. A country proposal for short-term technical assistance was prepared. Funds were made available under the GS programme for two priority activities: (i) improving the administrative reporting system for agricultural statistics; and (ii) preparing the SPARS for Lao PDR. The current document is the result of the second activity.

1.2 SPARS development process

The development of the SPARS for Lao PDR and the preparation of this document were carried out between July 2015 and June 2016. There are three phases in developing a country's SPARS: (i) the launching phase; (ii) the assessing phase; and (iii) the planning phase.

(1) Launching phase

The launching phase covers the initial preparations for designing the SPARS. The first step is for the national authorities to acknowledge the importance of agricultural and rural statistics for development planning and to recognize the need for a strategic approach to developing the agricultural and rural statistics system. Administrative structures are created for the SPARS design process, including establishing the SPARS design team, putting in place management procedures for the design work, and identifying stakeholders. The final step in the launching phase is the preparation of a roadmap for the SPARS development.

In Lao PDR, a Steering Committee on Agricultural and Rural Statistics (SCA) was established to provide overall direction for the SPARS development. The composition and Terms of Reference

of the SCA are given in Annex I. The Centre for Agricultural Statistics (CAS) in the Ministry of Agriculture and Forestry (MAF) led the SPARS preparation. A Technical Working Group on Agricultural and Rural Statistics (TWA), with representatives from the Lao Statistics Bureau (LSB) and MAF line departments, was established to support CAS in this work. See Annex II for the composition and Terms of Reference of the TWA. National and international consultants were also recruited to support the SPARS development work.

The roadmap for SPARS development in Lao PDR was prepared in August 2015 (FAO, 2015b). It illustrated the process for SPARS development in Lao PDR, including necessary organizational arrangements. A timetable of work to be done in preparing the SPARS was also presented. The roadmap also identified the agricultural and rural statistics stakeholders and provided a budget and sources of funding for the SPARS development work.

Details on the launching phase are presented in this chapter.

(2) Assessing phase

The assessing phase involves reviewing the current status of the agricultural and rural statistics system and identifying data gaps and weaknesses, with particular reference to data needs for national development plans. It also assesses the country's capacity to improve agricultural and rural statistics. In Lao PDR, the IdCA formed the basis for this phase of the work. The results of the assessing phase are presented in Chapter 2.

(3) Planning phase

The planning phase involves illustrating the strategic plan itself. This includes defining its vision, mission, strategic goals, outputs and activities. These activities are presented in the action plan, together with an associated financing plan. A monitoring and evaluation (M&E) plan is also developed to help in monitoring, reviewing, reporting and evaluating SPARS implementation. The results of the planning phase are presented in Chapter 3.

1.3 Administrative structure of Lao PDR

Administratively, Lao PDR is divided into provinces, districts, kumbans and villages. There have been many administrative changes over the years. The following describes the situation as of July 2015.

National government. Lao PDR is a unitary state headed by the President with an elected National Assembly. There are 18 ministries, the most important in the agricultural field being the Ministry of Agriculture and Forestry (MAF), which is responsible for crops, livestock, fisheries and forestry, and the Ministry of Planning and Investment (MPI) which includes the country's national statistics office, LSB.

Provinces. There are 17 provinces and one municipality (Vientiane Capital). Xaysomboun Province is a new province established in December 2013. Provinces are administered by a Provincial Governor (Municipal Governor for Vientiane Capital), appointed by the national

government. Most national government ministries have offices at the provincial level, including MAF and MPI.

Districts. There are currently 148 districts in Lao PDR. There have been considerable changes over the years. The number of districts per province varies from 4 in Sekong Province to 15 in Savannakhet Province. Districts are administered by a District Governor, appointed by the national government. Most national government ministries have offices at the district level, including MAF and MPI.

Kumbans. The kumban, or village development cluster, is a relatively new administrative unit established in 2007 to facilitate communication between districts and villages and to provide people in rural areas with better access to services. There is an average of nine villages per kumban. Kumban committees, consisting of district and village officials, are appointed and meet at least monthly.

Villages. There has been some consolidation of villages in recent years. In March 1999, there were 11 251 villages in the country. This had fallen to 8 662 by March 2011, consisting of 1 362 urban villages and 7 300 rural villages. The average rural village contains about 100 households. A village head is elected by the people of the village. Often, the village head has an office with some support staff.

Under the government's "three builds" strategy, provinces are the *strategic planning units* in the country; districts are the *planning and budgeting units*; and villages are the *implementation units*. With the move to more decentralization of public administration and the creation of kumbans, planning is becoming more localized.

In designing statistical systems, attention is given to providing the geographical disaggregation necessary to meet policy and planning needs. In Lao PDR, the strongest need is for statistical information at the national and provincial levels, and most statistical systems, especially sample surveys, are designed accordingly. There is a demand for data at the district level, but the large number of districts makes this difficult without using very large samples. Increasing interest for kumban-level data can be expected, but this data can only be provided from censuses and administrative reporting systems.

Provinces are often grouped into three regions: Northern Region, Central Region and Southern Region. For agricultural planning purposes, Lao PDR has been divided into six agro-ecological zones: Mekong Corridor, Central Southern Highlands, Vientiane Plain, Bolaven Plateau, Northern Highland and Northern Lowland. These do not align with provincial boundaries.

1.4 Policy context and demand for agricultural and rural statistics

1.4.1 Overview of the agricultural sector in Lao PDR[2]

Lao PDR has an area of 236 800 square km, about two-thirds of which are mountainous. The main lowland areas are along the Mekong corridor in the central and south of the country. Only 6 percent of the land area is arable. The climate is tropical with two distinct seasons: the wet season bringing south-west monsoon rains from mid-May to mid-October; and the dry season covering the rest of the year. Flooding is common during the wet season.

Lao PDR has achieved high economic growth rates over the last decade. In 2013/14, the economy grew by 8.1 percent. Agriculture contributed 24 percent of Gross Domestic Product (GDP) in 2014, down from 35 percent in 2009. Farm sizes are small: in 2010/11, the average area of agricultural land per farm household was 2.1 ha. The population of Lao PDR was 6.8 million in 2014, of which 64 percent lived in rural areas. Three-quarters of the labour force works in agriculture.

Rice is the dominant crop and is crucial to the economy and food security of Lao PDR. In 2010/11, 724 000 farm households grew rice, amounting to 71 percent of all households in the country. The total area of rice planted in 2015 was 985 000 ha: 769 000 ha of wet season lowland rice, 117 000 ha of upland rice, and 99 000 ha of dry season rice. One in eight rice farmers plant a dry season rice crop. Rice production in the country has more than doubled in the last 20 years – production in 2013 was 4.1 million tonnes – and Lao PDR is now self-sufficient in rice at the national level. Over 90 percent of rice grown in Lao PDR is of the glutinous variety.

Cropping is becoming more diversified in response to the opening up of new markets. After rice, maize is the most common temporary crop, especially in the north of the country. In 2010/11, there were 187 000 maize growers in the country. The area under sugar cane more than doubled between 1998/99 and 2010/11. Vegetable crops are also common, often planted in small kitchen gardens or on river banks. In 2010/11, 317 000 farm households grew some vegetables, which accounts for 41 percent of all farm households. The most commonly grown vegetables are chili, cabbage, cucumber, onion and melon. Cassava, groundnut, tobacco and sesame are other important temporary crops.

Coffee is grown on the Bolaven Plateau and in other southern provinces. Coffee exports were worth US$ 60 million in 2012. The rubber industry has seen rapid growth in recent years. In 2010/11, there were 49 000 farm households growing rubber, compared with almost none ten years earlier. Fruit trees are common but usually only grown on bunds, roadsides and as scattered trees around the farm. The most common fruit trees are mango, banana, jackfruit and tamarind.

Cattle are becoming increasingly important in Lao PDR, with 38 percent of all farm households in the country now raising them. The number of cattle in 2012 was 1.7 million, up

[2] Main sources of the data (see References): FAOSTAT (FAO's online database *http://faostat.fao.org*); MAF, 2012; MAF, 2014c; UNICEF; World Bank.

from 1.4 million five years earlier. Buffaloes are kept for use as draught animals, especially in the south. Pig raising is common in upland areas. Many households raise a few chickens or ducks.

Fisheries activities in Lao PDR are concentrated in areas along the Mekong River and its tributaries. Fishing as a full-time occupation is rare, but fishing is an important secondary activity for many farm households, either as a source of extra income or to supplement the family's food supply. Two-thirds of farm households in the country engage in capture fisheries. The production of capture fisheries in 2015 was estimated at 63 000 tonnes. Aquaculture is becoming increasingly important. In 2010/11, 68 000 farm households were engaged in aquaculture. The aquaculture fish production in 2015 was estimated at 96 000 tonnes, up from 63 000 tonnes in 2007.

Two-thirds of the land area of Lao PDR is forest covered. Timber and non-timber forest products provide for a wide range of subsistence needs, as well as being a source of food and income in rural areas. Forestry is also an important export earner. Nearly 70 percent of farm households exploit public forest land in some way; half of the farm households collect food products from the forest. Over 200 000 farm households sell some forestry products obtained from public forest land.

Lao PDR has made good progress in reducing poverty, but it is still widespread in rural areas. In 2008, 34 percent of the population was living on less than the international poverty line of US$ 1.25 per day, down from 44 percent in 2002. Food insecurity and vulnerability are prevalent: in 2010-12, 28 percent of the population was undernourished, down from 33 percent in 2004-06. Most of the food insecure live in rural areas. In 2008-2012, 27 percent of children aged less than five years were underweight, 44 percent were stunted, and 6 percent were wasted.

The staple food of Lao PDR is rice. In 2011, cereals (mainly rice) constituted 67 percent of the country's energy intake. Only 5.6 percent came from meat products. The per capita food supply is 2 356 Kcal per day.

1.4.2 Agricultural sector development strategy

The *Agriculture Development Strategy to 2025 and Vision to 2030* (MAF, 2015) sets out the national strategy for the development of the agricultural sector. The vision, goals and targets of the strategy are shown in Annex III. Essentially, the vision is to ensure food security and develop an efficient and competitive agricultural sector. The three goals relate to: (i) producing a stable supply of agricultural products; (ii) ensuring production of safe food in an environmentally friendly manner; and (iii) creating employment, generating rural income, and reducing the gap between urban and rural areas.

The aim for 2020 is for GDP for the agriculture/forestry sector to grow by 3.4 percent a year. Per capita energy intake will be 2 600 Kcal per day. Cereals should represent 62 percent of Kcal intake, compared with 10 percent for meat, eggs and fish, and 6 percent for vegetables, fruit and beans. Paddy production should reach 4.7 million tonnes a year, of which 1.0 million tonnes should be for export. Annual production of other major crops should be: maize 1.3 million tonnes; coffee 120 000 tonnes; sugar cane 2.15 million tonnes; and cassava 1.5 million tonnes. Livestock

products should increase to 263 000 tonnes annually, and annual fish production should be 225 000 tonnes.

By 2025, daily per capita energy intake should be maintained at 2 600 Kcal. Cereals will fall to 54 percent of total energy intake; meat, eggs and fish will increase to 13 percent; and vegetables, fruit and beans will rise to 8 percent. By 2025, annual paddy production should be at least 5 million tonnes, including 1.5 million tonnes for export. Maize production should reach 1.4 million tonnes a year, coffee 280 000 tonnes, sugar cane 2.4 million tonnes, and cassava 1.6 million tonnes. Meat production will be 414 000 tonnes a year, and fish production will be 297 000 tonnes a year.

1.4.3 National Socio-Economic Development Plans

In the 1980s, Lao PDR embarked on a programme of economic development based on achieving sustained growth with equity, with a view to graduating from Least Developed Country status by 2020. Five-yearly *National Socio-Economic Development Plans* (NSEDPs) are prepared to implement this programme. The Seventh NSEDP (MPI, 2011) covered the period 2011 to 2015. The Eighth NSEDP for 2016-2020 is currently under preparation. Reference is made in this document to the NSEDP draft of 24 November 2015 (MPI, 2015, unpublished).

NSEDP 2011-2015 continued the emphasis on socio-economic development, industrialization and modernization initiated in previous plans. The main targets of NSEDP 2011-2015 were to: maintain stable economic growth of more than 8 percent per year and achieve annual GDP per capita of US$ 1 700 by 2015; achieve the MDG targets by 2015; ensure sustainable development by integrating economic development with socio-cultural development and environmental protection; and support international integration. Good economic growth was recorded during the plan period with an average GDP growth rate of 7.9 percent per year. GDP per capita is expected to be US$ 1 800 by 2015.

In the agricultural sector, the main aims of NSEDP 2011-2015 were to: improve food security and encourage commercial agriculture for domestic consumption and exports; increase agricultural productivity through improved scientific and technological methods; eliminate shifting cultivation; provide employment to the landless and those who have been re-settled; protect forests and reforest degraded areas; and establish comprehensive irrigation systems. GDP growth rates of about 3.0 percent per year for the agricultural sector were achieved during the plan period, short of the 3.5 percent target.

For crops, rice production reached 4.1 million tonnes by 2015, just short of the target. Dry season rice production fell well short of the target because of poor rainfall and weaknesses in irrigation facilities. Production of other crops increased satisfactorily during the plan period, especially maize, taro, cassava, fruit and vegetables. Coffee production increased sharply, exceeding the plan's target. Production of sugar cane, tobacco and cotton were slightly below target. For livestock and fisheries, meat production in 2015 was just short of the target of 379 100 tonnes. Livestock populations generally met the targets. The commercial livestock sector has developed in line with the targets. Animal health continues to be a problem, although vaccination rates exceeded the targets. Aquaculture is becoming more important. For forestry, targets set for increasing forest cover, regenerating natural forests, and reforestation were not met.

NSEDP 2016-2020 continues the emphasis on economic growth, sustainable industrial development, strengthening human resource capacity, maintaining stability, and widening international cooperation. The objective, outcomes and outputs of NSEDP 2016-2020 are shown in Annex IV. Agricultural and forestry are covered under a number of outputs based on the *Agriculture Development Strategy*, as outlined in the following paragraphs.

Outcome 1, Output 1: Sustained and inclusive economic growth includes: further developing the agricultural sector to provide sustainable production of food; expanding agricultural production; improving productivity by modernizing agricultural production techniques; and sustainably managing forest resources. Priority will be given to promoting organic agriculture, marketing, agricultural processing, and irrigation. Modern milling and processing facilities will also be developed. Livestock and fisheries production is expected to increase. Targets have been set for forest planting and restoration, as well as for reduction in emissions from deforestation. Steps will be taken to effectively manage agricultural land. Agricultural credit will be more widely available.

Outcome 1, Output 4: Balanced regional and local development provides a development plan for each region according to its characteristics. In the *Northern Region*, the aim is to promote suitable crops, such as cassava, potatoes, fruit and vegetables, and to develop the cultivation of high value wood trees and processing industries for rubber, sugar cane and forest products. In the *Central Region*, priority areas for rice cultivation have been identified and emphasis will be given to improving irrigation facilities. To meet market needs, livestock and aquaculture will also be promoted. In the *Southern Region*, rice will be promoted in lowland areas and industrial crops such as coffee have been identified for agro-processing and export in suitable areas. Aquaculture will also expand.

Outcome 1, Output 5: Improved public/private labour force capacity envisages mobilizing financial and technical resources to improve the skills of the labour force in Lao PDR. This includes capacity building in agricultural statistics.

Outcome 2, Output 2: Ensured food security and reduced incidences of malnutrition sets a target for daily energy intake and provides for improved nutrition and food safety. It also covers measures to increase food production and boost agricultural productivity.

Outcome 3, Output 1: Environmental protection and sustainable natural resources management relates to improving the management, protection and restoration of forest and land resources. It also covers water resources management.

Outcome 3, Output 2: Preparedness for natural disasters and risk mitigation relates to managing and preventing natural disasters, as well as strengthening the capacity to adapt to climate change.

Outcome 3, Output 3: Reduced instability of agricultural production focuses on ensuring stable supplies, markets and prices for agricultural products.

Cross-cutting outputs include the management and application of Information and Communication Technology (ICT). This includes developing the basic infrastructure for

telecommunications and electronic information, developing e-government, improving Internet services, training in the application of technology, and increasing access to ICT services.

1.4.4 Sustainable Development Goals

The *2030 Agenda for Sustainable Development* adopted by the United Nations General Assembly in 2015 includes 17 Sustainable Development Goals (SDGs) and their associated 169 targets[3]. Of direct concern to agricultural and rural development are:

- Goal 2: end hunger, achieve food security and improved nutrition and promote sustainable agriculture;
- Goal 12: ensure sustainable consumption and production patterns; and
- Goal 15: protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.

Other goals of interest to agricultural and rural development include: Goal 5 (achieve gender equality and empower all women and girls); and Goal 6 (ensure availability and sustainable management of water and sanitation for all).

1.5 Framework for the collection of statistics in Lao PDR

Up until 2010, the statistical system in Lao PDR operated under a decree governing the organizational structure and operation of statistical activities in the country. The Department of Statistics under MPI performed the role of the national statistics office. A Statistics Law was enacted in June 2010. This upgraded the Department of Statistics to become the Lao Statistics Bureau (LSB), with the status equivalent to a sub-ministry. The Statistics Law provides for a partially decentralized statistical system.

Under the Statistics Law, LSB is responsible for: overseeing the development of the national statistics system in Lao PDR including determining policies, strategies and guidelines for national statistics; managing and implementing national statistical activities and disseminating official statistics; training statistical staff in LSB and other agencies; and coordinating with line ministries, agencies and provincial authorities to ensure the use of sound statistical methodologies in statistical activities. LSB conducts censuses and major national sample surveys, and compiles other national statistics such as the national accounts.

Each line ministry is given responsibility for collecting and disseminating statistics in its sector, under guidance from LSB. MAF is responsible for agricultural statistics. In particular, it is required to: implement statistical activities in the agricultural sector; provide data to LSB as needed, especially for compiling the national accounts; train statistical personnel in the agricultural sector; ensure sound statistical methodologies in statistical work in the sector; work with other agencies to provide harmonization in statistical work; collaborate with international agencies on agricultural statistics; and publish and disseminate agricultural statistics.

[3] See *https://sustainabledevelopment.un.org/?menu=1300.*

The Statistics Law describes the national statistics system as having two sub-systems: a "vertical" sub-system, represented by LSB and its offices in the provinces and districts; and a "horizontal" sub-system consisting of the line ministries and their statistical activities in provinces and districts. Provinces and districts can also undertake their own statistical activities provided they are approved by LSB.

The Statistics Law states that a Statistics Council might be established to formally oversee the statistical system in Lao PDR if the government considers it necessary. This body has not been formed.

In December 2014, the Minister for Agriculture and Forestry issued a *Decision on Agricultural Statistics* (MAF, 2014b) defining the principles, regulations and measures regarding the production, management and publication of agricultural statistics in MAF under the Statistics Law. CAS is designated as the lead agency responsible for the overall management of agricultural statistics in Lao PDR. Specifically, CAS is to: undertake agricultural surveys; disseminate agricultural statistics, especially through the *Agricultural Statistics Yearbook*; collaborate with relevant agencies to develop sound and uniform statistical methodologies; coordinate assistance and cooperation in all aspects of agricultural statistics; and oversee management of agricultural statistics databases. CAS is also to act as an agricultural statistics inspection agency to monitor, check and evaluate the collection of agricultural statistics. The Decision also sets out the responsibilities of MAF's technical departments, provinces, districts and villages for compiling agricultural statistics. It also lists the indicators to be published in the *Agricultural Statistics Yearbook* (see Section 2.1).

There has been considerable international support for the development of statistics in Lao PDR. The Swedish International Development Agency (Sida) provided support for LSB and its predecessor organizations from 1991 to 2011. During that time, it helped to develop the national statistics system in Lao PDR, providing the systematic collection and dissemination of key national statistics. The World Bank is currently funding a project in LSB covering the period 2013-2017 to further develop the capacity of LSB to produce economic and poverty statistics. Various agencies have provided support for agricultural statistics over the past 20 years.

1.6 Integration of agricultural and rural statistics into the NSDS

To support the Statistics Law, an NSDS for Lao PDR was formulated in 2010 (LSB, 2010). The NSDS covers the period 2010 to 2020.

The NSDS notes that the national statistics system in Lao PDR has improved over the years, particularly in regards to the greater awareness of the importance of statistics, the range and quality of statistics produced and disseminated, better statistical coordination, and improved skills of statistical staff. However, some weaknesses were identified. There are still data gaps and methodological weaknesses. There is also a need for more and better trained statistical staff and better application of technology.

The NSDS has seven goals, nine objectives, four strategies and 12 work programmes (WPs) (see Annex V). Activities have been outlined for each WP.

The essential elements of the seven goals are to: (1) provide reliable and timely statistics to serve user needs; (2) ensure that statistical activities comply with international standards; (3) further build the knowledge and capacity of statistical staff; (4) establish effective coordination mechanisms; (5) encourage the use and analysis of statistics; (6) expand statistical cooperation with neighbouring countries; and (7) ensure support in society for statistical work.

The nine objectives relate to: (1) upgrading the organizational structure for statistics; (2) strengthening the vertical/horizontal mechanisms for the provision of statistics; (3) increasing numbers of statistical staff; (4) strengthening line ministries in the provision of statistics; (5) providing more comprehensive statistics; (6) implementing a programme of sample surveys; (7) building statistical capacity; (8) developing registration statistics; and (9) making better use of ICT facilities. These objectives are relevant to agricultural and rural statistics, especially: better coordinating agricultural statistics activities (Objective 2); strengthening MAF statistical capability (Objectives 3 and 4); providing more comprehensive agricultural and rural statistics (Objective 5); conducting agricultural censuses and surveys (Objective 6); training of statistical staff in MAF (Objective 7); linking the reporting of agricultural statistics to the registration system (Objective 8); and making better use of ICT facilities for the reporting and transmission of agricultural data (Objective 9).

The four strategies are: (1) improving regulation and institutional frameworks; (2) developing statistical infrastructure; (3) management and development of data; and (4) ensuring statistical activities. WPs 1-6 under Strategy (1) cover elements related to organizational structure and coordination. WPs 7-8 under Strategy (2) cover infrastructure issues such as the use of ICT facilities and training. WPs 11-12 under Strategy (4) cover data security and confidentiality, as well as international relationships. Of most importance to agricultural and rural statistics are WPs 9-10 under Strategy (3), which relate to the development of sector indicators and the dissemination of data.

Under WP 9, the NSDS specifies the following agricultural statistics activities:

- Produce statistics to support calculations of the required indicators at the national, provincial and local levels and further develop the indicators;
- Collect data by various methods – administrative records, agricultural censuses and sample surveys – to ensure completeness and accuracy in statistics for the agricultural sector, and conduct ad-hoc surveys as required, such as on the impacts of natural disasters;
- Systematize data collection and harmonize methodologies, techniques and definitions during compilation;
- Conduct agricultural sample surveys needed for policy making, development planning and agricultural sector research, including surveys for rice and other crops, livestock and poultry, and forestry;
- Enhance knowledge and build capacity of staff at the ministry, province and district levels, especially in data collection, data processing and data management;
- Establish a data transfer system from local to central levels to ensure that data are transmitted in a timely, complete, accurate and statistically verifiable manner;

- Estimate crop, livestock, fisheries and forestry production, and calculate value added for the agricultural sector;
- Improve coordination and cooperation among government organizations involved in agricultural statistics work from central to local levels;
- Allocate funds for agricultural censuses and surveys; and
- Build a database for agricultural statistics and document data collections.

Under WP 10, dissemination activities include: determining a statistical release schedule; preparing manuals to document data; improving and expanding modes of dissemination to increase the scope and timeliness of data release, especially via the Internet; making wider use of geographic information systems (GIS) in the dissemination of data; establishing data dissemination teams; and conducting user satisfaction surveys. These will be important elements of the SPARS.

1.7 Action plan to improve agricultural and rural statistics

As part of implementing the GS in Lao PDR, MAF has prepared an *Action Plan for Improving Agricultural and Rural Statistics* (ARS) (MAF, 2014a). The ARS identifies seven outputs:

(1) Effective coordination mechanisms among agricultural and rural statistics stakeholders.

(2) Uniform standards, concepts and methods on agricultural and rural statistics are developed and applied across all districts and government agencies.

(3) Adequate training programmes are developed and implemented.

(4) Adequate number of staff trained in agricultural and rural statistics are hired.

(5) Adequate data collection equipment and support mechanisms are available.

(6) Data dissemination system is developed and applied.

(7) Good and appropriate data collection methods are adopted.

A work plan and schedule of activities for the period 2013 to 2020 is also included. Work has not yet started on implementing the plan.

The SPARS will build on the framework for improving agricultural and rural statistics provided by the ARS. The SPARS will contribute more information on integrating agricultural statistics into the national statistics system, the cost of implementing the plan, sources of funding, and technical aspects of statistics improvement work.

1.8 Key stakeholders

The major stakeholders for agricultural and rural statistics in Lao PDR are MAF and LSB. Other stakeholders include the various data users, including government agencies, the private sector, the development community and academic/research institutes.

Lao Statistics Bureau (LSB)

LSB is divided into four departments. The Department of Economic Statistics produces statistics on agriculture, GDP, industry, prices, investment, trade, transport and tourism. The Department of Social Statistics produces statistics on population, labour, education, health, culture and the environment. The Department of Data Services is responsible for data dissemination, information technology, statistical methodologies and human resource development. The Department of Administration is responsible for statistical coordination, personnel, budget/finance and other LSB administrative functions.

A Provincial Statistics Centre is located in each province (as well as in Vientiane Capital), each with 10-20 staff. The main responsibility of the centres is to oversee the implementation of LSB statistical activities in the provinces, including censuses, surveys and administrative reporting systems. The centres also compile provincial-level statistics such as national accounts under the technical direction of LSB, prepare provincial-level statistical reports for submission to LSB, and disseminate statistics in the province.

A District Statistics Centre is located in each district, usually with only a few staff. The main responsibility of the centres is to oversee data collection work for LSB in the districts. The centres also train local officials in the collection of data and prepare district-level reports for submission to provincial statistics centres.

LSB does not have its own field workers to carry out data collection work. Much of the administrative data emanates from the village head. For censuses and surveys, LSB recruits and trains enumerators such as teachers, students, police officers and military personnel.

Ministry of Agriculture and Forestry (MAF)

MAF is the highest agricultural policy making body in Lao PDR responsible for the formulation and implementation of national agricultural policies and development plans. The technical departments of MAF are:

- Department of Planning and Cooperation (DOPC), which includes CAS
- Department of Agriculture (DOA)
- Department of Livestock and Fisheries (DLF)
- Department of Forestry (DOF)
- Department of Forest Inspection (DOFI)
- Department of Irrigation (DOI)
- Department of Agricultural Extension and Cooperatives (DAEC)
- Department of Agricultural Land Management (DALAM)

As well as CAS, there are also statistics units in the Planning and Cooperation Division of each of MAF's technical departments. Each technical department is responsible for compiling statistics for its sub-sector based on administrative reports from lower-level administrative units. CAS gathers the statistics from each department to produce the statistics for the agricultural

sector as a whole for publication in the *Agricultural Statistics Yearbook*. CAS also produces agricultural data to meet international obligations such as for the ASEAN Food Security Information System (AFSIS).

There is a Provincial Agriculture and Forestry Office (PAFO) in each province (as well as in Vientiane Capital). PAFOs are divided into divisions corresponding to the MAF departments. Statistical work is carried out in the Planning and Statistics Division. Usually, a PAFO has two or three full-time statistical staff.

A District Agriculture and Forestry Office (DAFO) is located in each district. DAFOs usually have 15-20 staff and are divided into units similar to the PAFOs. The Planning and Statistics Units usually only have two or three staff, none of whom work full-time on statistics.

Agricultural extension services in Lao PDR are provided by DAEC. DAEC has an office under the PAFO in each province (and Vientiane Capital), staffed with specialists in each field (crops, livestock, fisheries, forestry, and rural development). DAEC also has an office in each DAFO, staffed with extension generalists called Farming Systems Extension Workers. In 2009, there were almost a thousand extension workers around the country. There are no government extension staff at the village level. However, Village Extension Workers (VEWs) are selected from within the village to help farmers. VEWs receive support from district DAEC staff. The village extension system is not fully operational.

Also under MAF is the National Agriculture and Forestry Research Institute (NAFRI), which coordinates all agricultural and forestry research in Lao PDR and informs the policy debate on key agricultural and forestry issues. NAFRI establishes priorities for agricultural research in Lao PDR to reflect the policy focus of MAF. Current areas of interest include improving agricultural productivity, land use, and land management. The NAFRI website[4] provides information on research results, surveys, training/extension materials, working papers and policy reports. NAFRI is the main source of technology generation in Lao PDR and undertakes some extension related activities in collaboration with DAEC.

There are five agricultural colleges in Lao PDR, all under MAF. These are the Luang Prabang Agriculture and Forestry College, the Thangone Irrigation College in Vientiane, the Borikhamxay Agriculture and Forestry College, the Savannakhet Agriculture and Forestry College, and the Champasack Agriculture and Forestry College. The colleges are the main source of qualified agricultural staff for MAF. No courses in agricultural statistics are provided.

Other stakeholders

MPI is responsible for formulating national economic plans and promoting foreign investment. The Ministry of Environment and Natural Resources (MONRE) is responsible for water resources management, disaster management and climate change, forest conservation, meteorology and hydrology. The Ministry of Industry and Commerce (MOIC) is responsible for regulating and promoting manufacturing, trade and import/export activity. This includes agro-processing. MOIC also collects some price data and compiles the exports/imports statistics. The

[4] See *http://web.nafri.org.la*.

Ministry of Health has an interest in food security and nutrition matters. The Bank of Lao PDR, as the country's central bank, is also a major stakeholder. The National University of Laos (NUOL) has a Faculty of Agriculture.

The international development community is also an important player in agricultural and rural statistics. The World Bank, FAO, the United Nations Development Programme (UNDP), the International Fund for Agricultural Development (IFAD), and ADB are all active in Lao PDR. Bilateral donors who have recently worked in agricultural statistics in Lao PDR include the Swiss Agency for Development and Cooperation (SDC), the Australian development agency AusAID, the German development agency Gesellschaft für Internationale Zusammenarbeit (GIZ), the Agence Française de Développement (AFD), the Japan International Cooperation Agency (JICA), the Korea International Cooperation Agency (KOICA), and Sida.

In recent years, there has been increasing private sector investment in agriculture, especially foreign enterprises. Accordingly, the private sector has become an increasingly important user of agricultural statistics.

CHAPTER 2

EVALUATION

In Chapter 1, information on the launching phase of the SPARS in Lao PDR was presented. Agricultural sector development issues were pressented, and the need for agricultural and rural statistics to monitor progress in national development plans was highlighted. The framework for the collection of statistics in Lao PDR and the integration of agricultural and rural statistics into the national statistics system was outlined. Key stakeholders were also identified. Chapter 2 presents the results of the assessing phase of the SPARS development, in which the current agricultural and rural statistics system is evaluated, data gaps and weaknesses are identified, and the country's capacity to improve agricultural and rural statistics is examined. This provides the basis for determining what action is needed to improve statistics and how the SPARS should be designed to achieve this end. Much of the material in this chapter is taken from the IdCA report.

2.1 Assessment of statistics outputs

2.1.1 Censuses

The Statistics Law stipulates that LSB will conduct a census of population and housing every ten years. The most recent censuses were in 2005 and 2015. The Census of Population and Housing 2015 (CPH 2015) was undertaken in March 2015. Results are not yet available. The censuses have been carried out according to international standards and the data are of high quality. Data are collected on the demographic, literacy, educational, labour force and other characteristics of the population, as well as housing characteristics.

According to the Statistics Law, an agricultural census is to be conducted every ten years. Two agricultural censuses have been conducted to date: in 1998/99 and 2010/11. The censuses were based on FAO guidelines and the data are of high quality. The agricultural censuses provided structural data such as land use, area under crops by crop type, livestock numbers by type, and farm mechanization. The 1998/99 census was conducted by LSB in collaboration with MAF, with financial support from Sida and technical assistance provided by Statistics Sweden. For the Lao Census of Agriculture 2010/11 (LCA 2010/11), MAF had primary responsibility for conducting the census. LSB provided some technical assistance. Technical support was also provided by FAO. Financial support was provided by SDC, IFAD, ADB, AusAID, GIZ and AFD.

Data from LCA 2010/11 were released in the report *Lao Census of Agriculture 2010/11, Highlights* (MAF, 2012). The report provided data at national and provincial levels. District-level data are available on request. Census data files were also made available to selected users. An analytical report on LCA 2010/11 was also published (FAO, 2014a), focusing on six themes: composition and structure of farm households; land use, cropping patterns and agricultural performance; forestry, aquaculture and fisheries; village-level infrastructure and development constraints; livestock and poultry production; and gender dimensions of agriculture.

LCA 2010/11 data are also available on *Lao DECIDE* (see Section 2.2). Work is under way on the preparation of an *Agricultural Atlas*, based on data from LCA 2010/11.

The only economic census in Lao PDR was conducted in 2006. The census covered most economic entities, except for household agricultural units, and collected data on location of activities, size, economic activities, economic structure, employment, skills of employees, capital structure, and access to technology.

2.1.2 Crop statistics

MAF compiles crop area, yield and production statistics using administrative reports transmitted from villages to districts to provinces to MAF's technical departments to CAS. The *Ministerial Decision on Agricultural Statistics* sets out the schedule for the reporting of crop and other agricultural statistics. Three types of reports are provided: data for publication in the *Agricultural Statistics Yearbook*; data for calculating GDP; and data for general monitoring purposes, including weekly reports. In all, 90 reports per year are submitted. The reporting schedule is not always followed.

Weekly meetings are held at each level to review the weekly reports. Village heads attend a meeting in the kumban where they submit the weekly report to DAFO representatives. Each DAFO reviews the outcome of the kumban meetings and prepares a district report, which is hand-delivered or faxed to the PAFO. Each PAFO reviews the district reports and prepares a province report for each technical department in MAF. These reports are usually forwarded by fax. At the central level, MAF holds a weekly meeting of all technical departments to review agricultural conditions nationally.

The only crop data reported are area planted, area harvested, production and yield for each major crop, as stipulated in the *Ministerial Decision on Agricultural Statistics*. The crops reported are:

- Rice: lowland rainfed, upland rainfed, dry season.
- Other temporary crops: maize, sweet corn, soya bean, mung bean, groundnut, black/red bean, cassava, sweet potato, potato, yam, taro, sesame, Job's tears, tobacco, cotton, sugar cane, leafy vegetables, tuber vegetables, fruit-bearing vegetables, watermelon, and cantaloupe/other melons.
- Permanent crops: coffee, tea, cardamom, banana, pineapple, papaya, and lemon.

Villages use different methods to obtain the crop statistics. Sometimes, the village head summons households to report on the data required. In other cases, the data are based on the village head's own estimation or judgement. Sometimes, district staff go to villages to help collect data from each household. It is acknowledged that some data, especially crop production, are not always reported by villages, but estimated by the districts. Recently, LSB has introduced a new village book in some villages that provides a wide range of socio-economic data, including crop data. The village head updates the village book annually, but this is not usually coordinated with the reporting for MAF.

The weaknesses in the statistical system for crops are well known: the statistics lack objectivity; concepts and definitions are not well-defined; there are no standard reporting forms; data collection and reporting procedures at the village level are not standardized; and the transmission of data is not always timely. Currently, it is not feasible to replace the existing administrative reporting with censuses and sample surveys, because of budget and manpower shortages. Administrative reporting will continue to be the core of the agricultural statistics system in Lao PDR, at least for crop area data. In the short term, priority should be given to improving the reporting system by implementing uniform standards, definitions, data reporting methods and reporting forms, as well as introducing effective management, coordination, supervision and quality control mechanisms.

Currently, CAS has no control over data reporting at any level; its role is limited to publishing data received from the technical departments. CAS should have a major role in the overall management of the agricultural statistics system in accordance with the *Ministerial Decision on Agricultural Statistics*. Statistical responsibilities at each level also need to be clearly defined and mechanisms put in place to supervise and control the data reporting operation.

CAS has had some experience in crop sample surveys, with support from various donors. These have included: the 1994 and 1995 rice production surveys, which included the use of crop cutting methods; other crop cutting surveys; the 2008 rice assessment survey; and the 2013 pilot land survey, which was based on area sampling using *Google Maps* to estimate the area of agricultural land and crops. CAS recently worked in one province on evaluating the use of satellite imagery in an area sample approach to estimate the area of rice planted. Despite the success of the various sample survey initiatives, none have led to real changes in the methodology for crop statistics. The crop cutting methodology is well-established and widely used around the world; it should also be used in Lao PDR, certainly for rice, but also eventually for other crops.

One possible application of sample surveys is to validate the existing administrative data. For example, initially, crop cutting surveys might be used to assess the quality of the reported yield and production data. Periodic surveys could also be conducted to validate reported crop area data. Sample surveys could also be used in conjunction with the administrative reporting system itself – for example, to report data for a sample of villages only. This would enable the administrative reporting operation to be more closely supervised and controlled.

Information on crop conditions and crop losses due to flooding, drought and pests are included in the weekly reports. However, no crop condition reports as such are prepared or disseminated. Also, no formal crop production forecasting is done. There have been some training initiatives in this area and some unofficial rice production forecasts have been prepared, but this work has not been regularized. This is an important area for further work in MAF.

2.1.3 Livestock statistics

Livestock statistics are prepared based on the administrative reporting system described in Section 2.1.2. Data are transmitted through the various administrative levels. Livestock information is reported irregularly and is limited to data on the number of cattle, buffaloes, pigs, goats/sheep, and poultry according to the specifications given in the *Ministerial Decision on*

Agricultural Statistics. Livestock statistics have the same administrative reporting weaknesses as crop statistics.

DLF releases some livestock production data based on assumptions about slaughtering rates, milk yields and productivity of layers. These data are not formally published. To improve this estimation, periodic sample surveys should be conducted to measure basic livestock production parameters. CAS has some experience with these types of surveys. The agricultural censuses provide baseline data which could also be useful in estimating current livestock statistics.

2.1.4 Fisheries and aquaculture statistics

Fisheries statistics are prepared based on the administrative reporting system described in Section 2.1.2. The only two data items reported are the production of capture and culture fisheries. Village heads find it difficult to report fisheries information and the data may not be of high quality. Improved data collection methods are needed.

Some fisheries related information was collected in LCA 2010/11, including whether the household had any aquaculture facilities and whether it was engaged in capture fisheries. Data were also collected on: types of aquaculture production facility (rice-cum-fish culture, pond, cage, tank, other); area of aquaculture; whether aquaculture products were sold; where capture fishing was done (river, lake/reservoir, swamp/seasonal floodplain, rice field, irrigation canal, village pond, other); and whether capture fisheries products were sold. Most fisheries activities are carried out by households; therefore, a periodic household fisheries survey would be useful for compiling fisheries statistics.

2.1.5 Forestry statistics

DOF is responsible for the collection of forestry data. Data are provided on quantity of tree seeds collected, number of seedlings produced, area planted to trees, and area of forest regenerated. The data are obtained from provincial reports and are not considered of high quality. Provinces also provide data on timber production, based on reports submitted by loggers. These data are also not considered reliable: there are no consistent procedures for reporting data, loggers often do not maintain good records, and data reported are not always complete.

No data are available on the collection of firewood or non-timber forest products, apart from data from LCA 2010/11, which collected data on whether the household exploited public forests and, if so, what forest products were extracted (timber, fuel wood, bamboo, mushrooms, fruit and vegetables, other) and whether any of those products were sold. Periodic household forestry surveys would help in compiling forestry statistics.

Data on exports of timber products are compiled by MOIC based on Customs Department data.

2.1.6 Agricultural markets and prices statistics

LSB compiles the Consumer Price Index (CPI) every month. Data are collected for 245 items from 18 markets in 12 provinces. The base year is 2010. Data presented include the CPI for each of 12 groups, as well as average market prices for major crop, livestock and fisheries products. It is planned to expand the coverage of the CPI to cover all provinces.

The NSDS mentions the need for LSB to develop producer price data for main products, in coordination with concerned agencies. It has been agreed that MAF should have responsibility for the collection of agricultural producer prices. CAS has instituted farm-gate price collection, but the data are difficult to collect, are not regularly submitted, and are not disseminated. A sound and workable system for the collection of farm-gate prices should be developed.

2.1.7 Water and environment statistics

The NSDS highlights the lack of statistics on the environment in Lao PDR and the need to develop statistics in this field in accordance with international standards.

Irrigation data are reported as part of MAF's administrative reporting system. The data reported are: area irrigated by season, number of facilities and area irrigated by type of facility (irrigation dams, reservoirs, pumps, gates and dykes, temporary weirs, and gabions). The area data are thought to relate more to the command area of irrigation projects rather than actual area irrigated. No data are provided on the use of irrigation for specific crops.

MONRE monitors and coordinates the environment nationally and has compiled various environmental data, including greenhouse gas emissions from agriculture. Some limited environmental data were collected in the agricultural censuses.

2.1.8 Food security and nutrition statistics

The five-yearly Lao Expenditure and Consumption Survey (LECS) provides information to help measure the prevalence of undernourishment. Several nutrition and food security surveys have also been undertaken. In 2012, CAS undertook the Food Security Risk and Vulnerability Survey, funded by AusAID. In the same year, LSB carried out the Lao Social Indicator Survey. LSB has also recently undertaken a Baseline Survey on Food Security and Nutrition in five provinces.

2.1.9 Rural development statistics

Rural development statistics cover the characteristics of the rural population, including employment in agricultural and non-agricultural jobs, socio-economic status, housing conditions, and access to services such as water, electricity, communications infrastructure and transport facilities. The primary sources of data for rural development statistics are population and housing censuses and other national household surveys such as LECS.

For CPH 2005, the urban/rural status of each village was defined according to certain criteria relating to population, vicinity to a district or provincial capital, road access, availability

of services, and presence of a market. Rural villages were divided into two categories: those with year-round road access and those without year-round road access. The urban/rural classification enables the population and housing censuses and other household surveys to be tabulated for rural areas, providing the basis for generating rural development statistics. CPH 2005 provided data on housing conditions, access to services, demographic characteristics, labour force characteristics, literacy and educational attainment for rural villages. LECS provides data on household expenditure, consumption and nutrition for rural villages. LCA 2010/11 provided data on rural infrastructure and services.

There are also other sources of rural development statistics: data on rural roads are available from the relevant transport authorities; data on area equipped for irrigation are available from MAF.

2.1.10 Other agriculture related statistics

Cost of production. No cost of agricultural production surveys have been undertaken in Lao PDR. Cost of production data are needed for each agricultural production activity.

National accounts. LSB compiles national accounts statistics for Lao PDR annually based on the United Nations System of National Accounts (SNA). To compile the national accounts for the agricultural sector, production data are obtained from MAF, input data are derived from LECS, and price data are obtained from various sources. The quality of national accounts for the agricultural sector is affected by weaknesses and gaps in the agricultural statistics.

Lao Expenditure and Consumption Survey (LECS). LSB conducts a LECS approximately every five years. The fifth and most recent survey was in 2012/13. It collected data on socio-economic characteristics of households, access to services, household expenditure, household consumption, and nutrition. LECS also includes an agricultural module; for LECS 2008/09, it included: area, production and yield for each crop; disposal of crop produce; number of livestock and poultry by type; additions/subtractions to livestock herds; details of capture and culture fisheries; and exploitation of own and public forest land.

International trade statistics. MOIC compiles statistics on exports and imports based on information obtained from the Customs Department of the Ministry of Finance. Data are available annually. The quality of the export data is considered to be quite good, except for mineral and wood related products, which may be understated. Import data might also be understated. The trade statistics are not based on the Harmonized Commodity Description and Coding System (HS).

Labour force survey. LSB, in collaboration with the Ministry of Labour, Social and Welfare, conducted a household labour force survey in 2010. This was the first survey of its type undertaken in Lao PDR, and was designed to measure demographic characteristics, education and training, employment, unemployment, non-economic activities, and migration.

Food balance sheet. CAS compiles a food balance sheet for Lao PDR every year using data from various sources, including MAF's own agricultural production data, nutrition data from the Ministry of Health, food consumption data from LECS, and export/import data from MOIC. There

are weaknesses in data on stocks, post-harvest losses and domestic utilization of food products. CAS does not formally publish the food balance sheets.

Food stocks. There are no data on food stocks in Lao PDR. There is no national rice reserve in the country. At any time, there are stocks of rice held by households, rice millers, wholesalers and retailers.

Land use. Some statistics on land use were provided by the two agricultural censuses. The data were based on FAO guidelines and referred to the main use of the farm household's land. DOF has provided land use data for 1982, 1992 and 2002, using remote sensing. Agricultural land was divided into: rice paddy, agricultural plantation, and other agricultural land.

Agro-processing statistics. There are no formal statistics on agro-processing, apart from export data.

2.2 Data dissemination

LSB issues the *Statistical Yearbook* in the middle of each year. The Yearbook contains a range of economic and social data, including data on agriculture obtained from MAF. LSB shows some statistics on its website, including agricultural statistics.

CAS's only regular agricultural statistics release is the *Agricultural Statistics Yearbook*, issued in the middle of each year. The 2015 issue presents crop data for the 2014 wet season and the 2013/14 dry season. This is too late for most users. There is little commentary in the Yearbook to help users interpret and analyze the data. DOA issues three crop reports a year: a wet season report early in the year showing data for the previous year (the 2015 issue shows data for the 2014 wet season); a dry season report in August/September providing data for the most recent dry season (the 2015 issue shows data for the 2014/15 dry season); and a combined report in April each year, showing data similar to the *Agricultural Statistics Yearbook*. There may be discrepancies in the CAS and DOA data. The roles of CAS and DOA in data dissemination should be clarified.

There are several online databases available in Lao PDR showing agricultural statistics. *Lao DECIDE*[5] is a government initiative to provide key national databases and tools to enable users to tabulate and map data. Village-level data from LCA 2010/11 are shown. Further facilities for analyzing agricultural census data are being developed. *Lao Info* is a database of socio-economic indicators for Lao PDR maintained by LSB based on *DevInfo*[6], the United Nations database system used for monitoring the MDGs. So far, little data are available on *Lao Info*. In 2013, a *DevInfo* application was developed to provide district-level tables from LCA 2010/11. Agricultural data for Lao PDR are also shown on a number of international databases, including AFSIS and FAO's online database, FAOSTAT[7].

[5] See *http://www.decide.la.*

[6] See *http://www.devinfo.org.*

[7] See *http://faostat.fao.org.*

An important element in data dissemination is the Lao PDR National Data Archive (LNADA) [8]. LNADA is a web-based data repository system maintained by LSB providing documentation and metadata on all major national statistical collections, including the methodology, sample design, data collection, data processing, and data collected. LCA 2010/11 is included in LNADA.

A data dissemination system is needed in CAS to provide a wider range of more timely statistics. A monthly crop condition report should be issued. CAS should also disseminate price data, as well as food balance sheets. Most data releases can be done via the Internet. CAS will need to develop a website for this purpose. A data release calendar is also needed.

2.3 Assessment of user satisfaction and needs

Agricultural and rural statistics have many uses. Governments need statistics to measure the performance of the agricultural sector, to plan and monitor development programmes, and to compile the national accounts. The international development community needs statistics to help plan and implement development programmes. Institutes such as NAFRI and NUOL need data for agricultural research and analysis. The private sector needs information to help in their commercial operations. The farmers themselves are also potential users of agricultural statistics, especially market related data, to help make decisions about their farm operations.

The most important user of agricultural and rural statistics is the government. In Lao PDR, MAF and its technical departments are the principal users. MPI and the Bank of Lao PDR are other important users, along with MONRE and MOIC. The Ministry of Health is an important user of food security statistics. Under the former central planning system, the main government needs were for data on agricultural production and farm operations; now, the emphasis is on market issues, sustainable development, food security and rural development.

LSB and MAF acknowledge the weaknesses in basic agricultural statistics from the administrative reporting system and the need for improvements in the reporting procedures. There are also major data gaps, especially on agricultural prices, livestock production, land and water management, the environment, cost of production, and forest management. The SPARS is designed to address those issues.

The GS initiative provides a mechanism for countries to identify data of most importance for agricultural policy making and planning. Under the first GS pillar (see Section 1.1), it is recommended that countries determine a minimum set of core data to provide internationally comparable indicators. The core items in the GS are based on their importance to global agricultural production. Economic data are presented under nine headings (output, trade, stocks, inputs, agro-processing, prices, final expenditure, rural infrastructure, and international transfer). Social data cover demographic and economic activity items. Environmental data include soil degradation, water pollution and agricultural emissions. In the GS, the core data are limited to eight core crops (wheat, maize, barley, sorghum, rice, sugar cane, soya bean and cotton) and five core livestock types (cattle, sheep, pigs, goats and poultry). The GS recommends that each country select core items appropriate for its agricultural situation. In Lao PDR, the core crops

[8] See *http://www.nsc.gov.la/nada/index.php/home*.

have been identified as: rice, maize, sugar cane, soya bean and cotton. The core livestock types are: cattle, pigs, goats and poultry.

The minimum set of core data items for Lao PDR is shown in Annex VI, together with the required frequency and sources for each data item. This provides a good basis for identifying data needs, gaps and priorities to help in developing the SPARS action plan, with emphasis given to improving the statistics for the core crop and livestock items.

Key data needs can also be identified by reference to the indicators for the M&E systems for the *Agriculture Development Strategy*. These include:

- GDP separately for the agriculture, livestock, fisheries and forestry sub-sectors;
- daily per capita energy intake;
- per capita consumption of major food groups;
- production of each crop type;
- production of rice according to glutinous/non-glutinous varieties;
- rice exports;
- rice stocks; and
- production of meat, fish and eggs.

The indicators for monitoring the NSEDP and SDGs also help to identify needs for agricultural and rural statistics. At the time of preparation of this SPARS, the M&E system for NSEDP 2016-2020 had not yet been finalized. For the SDGs, draft indicators have been preparedand the availability of the necessary data to measure those indicators in Lao PDR is being reviewed. It is expected that data needs for the NSEDP and the SDGs will be similar to those required to monitor the *Agriculture Development Strategy*.

The agricultural censuses have provided valuable data on the structure of agricultural holdings in Lao PDR. The agricultural sector in Lao PDR is undergoing rapid change, especially with increasing farm mechanization, better access to markets, and changes in cropping patterns. Users stress the need for agricultural censuses to be repeated, at least once every ten years, to measure those changes. There is a strong argument for bringing forward the date of the next agricultural census to 2019 (from 2021) to provide data in time to help in preparing the next round of development plans; that is, agricultural census data would be available in 2020, in time to review NSEDP 2016-2020 and to prepare NSEDP 2021-2025. In the future, agricultural censuses should be undertaken in years ending in “9”.

There is a growing awareness in Lao PDR of the importance of agricultural research in support government policy making. Agricultural censuses and other household surveys are valuable for this purpose because they enable analysis of household-level data. The two agricultural censuses are the only national household-based agricultural surveys conducted to date in Lao PDR. Implementing a regular programme of household surveys will provide greater opportunities for analysis and research.

Farmers in Lao PDR will increasingly demand statistical information to help manage farm operations. With the emphasis on marketing and exports, farmers need to be aware of the market

situation, and some countries establish market information systems for this purpose. In the long run, farmers might also need other information on crop plantings, weather, stocks, international trends and exchange rates. These needs should be recognized in developing statistical systems.

There is general support in Lao PDR for the decentralized statistical system and the role of line ministries, including MAF, in the collection and dissemination of statistics. There is also recognition of the need for data collecting agencies to work closely with LSB to ensure a coordinated and integrated national statistics system. For agriculture, there is some duplication in data collection between LSB and the different departments in MAF, and data are not always consistent. This makes it difficult for users, and needs to be addressed in the SPARS action plan.

2.4 Capacity assessment

Budget

The NSDS estimates the cost of the national statistics system in Lao PDR as approximately 21.8 billion kips per year, excluding salaries. This includes 15.0 billion kips per year for survey expenses, of which only 3.7 billion kips are expected to be available from the government budget. Donor assistance for major statistical activities will continue to be needed for the immediate future.

In LSB, the budget for staffing has risen in recent years as staff numbers have increased. Within MAF, funds are provided for staffing CAS and the departments' statistical units, but there is little funding for data collection, training or data dissemination. The government also funds statistical staff in the provinces and districts but there is little funding for field or data collection activities.

The development of new statistical methodologies for agricultural statistics in Lao PDR has largely been driven by funds from donor agencies. Usually, activities initiated under international projects were not able to be sustained after the projects ended. For LCA 2010/11, the government made a contribution of US$ 211 000 plus other in-kind costs such as staffing and office expenses. It is expected that the government share of funding for major statistical activities will gradually increase.

Human resources

Technical staff in LSB have good working knowledge of all aspects of the design, collection and processing of censuses and surveys as a result of the long-running Sida statistics project and the participation of staff in domestic and international training and study tours. The NSDS notes that the number of statistical staff in LSB and in other agencies is low compared to other countries, and this is considered an impediment to further developing the statistical system. The NSDS recommends increasing the number of staff in LSB from 59 in 2010 to 160 by 2015 and to 200 by 2020. By April 2015, the number had increased to 129. Of these, only two staff worked part-time on agricultural statistics. The NSDS recognizes that capacity building will be needed for new staff. Existing staff should also be encouraged to enhance their educational qualifications. It is

envisaged that over the period 2010-2020, 30 LSB staff will receive a diploma or bachelor/masters degree and three will obtain a doctoral degree.

The NSDS recommends that there should be 6-10 statistical staff in each ministry. It also identifies the need to enhance knowledge and build the capacity of statistical staff in MAF and other line ministries. There are currently 13 staff in CAS and one or more statistical staff in each technical department. This exceeds the NSDS recommendation, but is appropriate given the importance and scope of the agricultural sector.

Organizationally, CAS is a centre under DOPC, headed by a director. It reports to a Deputy Director-General of DOPC. The 13 staff consist of 10 permanent officers, two temporary officers and one volunteer. There is recognition in MAF that upgrading CAS – perhaps to a department – would help to give the unit the authority to better manage the agricultural statistics system in technical agencies, PAFOs and DAFOs. MAF is considering this matter. With or without an upgrade, CAS should be reorganized to more effectively carry out its role. Specialist units may be needed for statistical standards, administrative reporting, sample surveys, data processing, training and data dissemination.

Only two officers in CAS have a degree from a foreign university. The degrees are not in statistics. Others have degrees from NUOL. Some officers have attended international training courses, including the basic statistics course in SIAP. Two attended a three-month course in crop forecasting at FAO. Some officers have attended international statistical meetings abroad.

The various international project activities over the last 20 years have provided good experience for CAS staff in agricultural census and survey work. However, the officers with the most experience have moved into senior positions and are approaching retirement. The majority of CAS staff have been recruited in the last 5-10 years. The next generation of statisticians needs to be developed to take the agricultural statistics system forward.

The recent agricultural census provided CAS staff with experience in all aspects of conducting a census. Six CAS staff were assigned to the Agricultural Census Office for a two-year period where they worked on the planning, design and development of the census, including questionnaire design, pilot testing, budget planning and field organization. They also trained field staff, performed the role of provincial census coordinators, supervised the census data entry and editing, and prepared and disseminated census output. Training was provided throughout the various phases of the census.

CAS staff have good general computer skills and all are familiar with Microsoft Word and Excel. Some have limited capacity in using Microsoft Access. Some have been trained in SPSS but have not worked with this software. Most staff are familiar with GIS and have some experience in statistical mapping work. Further capacity building is needed in CAS, particularly in data processing and data management, data analysis and report writing, and data dissemination, especially electronic dissemination.

Statistics Units in MAF technical departments usually have one or two staff. Most statistical staff have no formal education or training in statistics. Training is needed in statistical methods, data processing and data management.

The NSDS recognizes the need for building the capacity of statistical staff in PAFOs and DAFOs. Most of these staff have no formal education or training in statistics. As well as general statistical training, they should also be given training specific to their responsibilities in managing and supervising data reporting activities as part of an improved administrative reporting system. Village officials should also be given training relevant to their statistical responsibilities.

The development of a long-term training programme for agricultural statistics officers in MAF is an important output of the SPARS. Over the next ten years, the aim for some CAS staff is to provide opportunities for them to receive a diploma or bachelor/master/doctoral degree in statistics from universities in the region. These staff can then pass on specialist knowledge through in-country training. Consideration should be given to establishing an Agricultural Statistics Training Unit in CAS or elsewhere to provide training to staff at all levels. Links might be established with one or more of the agricultural colleges to support this training. NAFRI might also have a role to play in this training.

Another area for capacity building in agricultural and rural statistics is to increase awareness amongst users of how data can be used for planning and policy making. The SPARS should include activities aimed at raising statistical awareness, especially amongst senior-level officers in MAF.

Use of information and communication technology

The NSDS highlights the need for improving the ICT infrastructure for an effective national statistics system. It recommends that ICT equipment be upgraded and suitably maintained at all levels to ensure efficient and effective statistical production, and that software such as SQL Server, SPSS, STATA and ArcView be upgraded to help in data processing, analysis, storage and dissemination. Improvements in networking between the central and local levels were also foreseen, to facilitate statistical coordination and data exchange and to improve data management.

NAFRI is currently overseeing ICT development in MAF within the framework of the overall e-government strategy. This envisages the development of the necessary infrastructure to connect central-level government agencies with provinces, districts and villages, and training of users and information services personnel to effectively use those services. In MAF, the aim is to integrate ICT facilities and improve the capacity to collect, analyze, store and share agricultural information. The improvement in communication facilities in the country also opens up possibilities for the use of tablet computers or mobile phones in data collection work.

Adequate computer facilities are available in LSB and CAS. In CAS, the computers are not fully networked but all have an internet connection. Computer facilities in PAFOs are also good, and they all have internet access. DAFO staff have some access to computers but only some have internet access. Computer facilities are generally not available at the village level.

LSB processes its censuses and surveys using SQL Server and Microsoft Access. It has no experience in CSPro. Tables are usually prepared using SPSS. To date, all LSB census/survey processing work has been done centrally. As computer networks and staff skills improve in the provincial statistics centres, future data entry, and even much of the editing, could be done in the

provinces. LCA 2010/11 planned to use scanning for data capture, but it was decided that keyboard data entry was more suitable. In Lao PDR, computers are cheap, the technology is uncomplicated, labour costs are low, and experienced operators are readily available. The data entry for LCA 2010/11 was done by a private contractor, which worked well.

Physical infrastructure

In Lao PDR, there are only a limited number of telephone landlines, but mobile phone use is high with an estimated 90 percent penetration rate. Mobile phone service is good, even in rural and remote areas, which provides opportunities to improve the collection and transmission of statistical information. In the LCA 2010/11, good use was made of mobile phone services to manage and supervise the data collection work.

Internet use in Lao PDR is still quite low. However, with the availability of cheap smartphones, the demand for the internet is growing and internet services are becoming increasingly available, even in small towns. By 2015, 3G internet services were available in all district headquarters.

The road network in Lao PDR has improved considerably over the last 15 years. There are now sealed road connections to all provincial capitals (except Phonesaly) and most district capitals. Road connections to villages have also improved. However, a third of villages do not have year-round road access, and one in ten have no road access at all. The improvement in roads has made data collection easier. Few vehicles are available in MAF for statistical work, though government officers usually have access to a motor vehicle of some sort, often a motor cycle. The government practice for data collection and other field activities is to pay field staff an allowance when they use their own vehicle for official work.

2.5 SWOT analysis

SWOT (strengths, weaknesses, opportunities, threats) analysis is a useful tool in assessing the existing agricultural statistics system in Lao PDR and planning its future development. In particular, it identifies:

- the weaknesses in the current agricultural statistics system;
- the organizational and administrative strengths that exist within LSB and MAF to help overcome those weaknesses;
- the external factors that provide opportunities to improve the statistical system; and
- the external factors that represent threats to making those improvements.

A SWOT analysis was carried out for the agricultural statistics system as a whole, as well as for three sub-sectors: crops, livestock and fisheries, and forestry. Results are shown in Annex VII, and are summarized below.

The main strengths are the availability of the ARS, which provides a framework for the development of agricultural statistics, and the *Ministerial Decision on Agricultural Statistics*, which establishes the responsibilities of all parties in the production, management and dissemination

of agricultural statistics. The presence of a well-staffed CAS provides a good base for improving statistics. The statistical units in technical departments, PAFOs and DAFOs provide useful resources for agricultural statistics activities. MAF and LSB have successfully conducted two agricultural censuses, leading to attainment of valuable experience for introducing improved methodologies in agricultural statistics, especially sample surveys.

The main weakness is the reliance on administrative reporting for most current agricultural statistics. This methodology is not statistically sound and data are not always of high quality. The crop cutting methodology is not used for crop production statistics. No livestock production data are available. It is difficult to report reliable fisheries and forestry data. Agricultural statistics are not widely disseminated and data are usually made available too late for useful planning and policy making. Available technology is not fully utilized. Skill shortages in statistics exist at all levels.

Good opportunities are provided by a government priority on statistics, as reflected in the adoption of the Statistics Law, the upgrading of LSB, and the increase in LSB staff. The Statistics Law clearly defines the scope of agricultural statistics and the relationship between MAF and LSB at all levels. The NSDS provides a long-term vision for the overall development of statistics, including agricultural statistics. The GS initiative also provides opportunities to tap into strong donor interest in agricultural and rural statistics. Agriculture continues to be one of Lao PDR's key economic sectors and is given high priority in the NSEDP, which focuses attention on the need for reliable agricultural statistics.

As in many countries, the main threat to efforts to improve the agricultural statistics system is the lack of funds. The planned introduction of new methodologies involving more household data collection and use of technology is likely to be constrained by funding shortages. There might also be some institutional resistance to introducing new statistical methodologies. Frequent changes to administrative units also make it difficult to keep sample frames up-to-date.

CHAPTER 3

PLANNING

In Chapter 2, the agricultural and rural statistics system in Lao PDR was described and the data collection methodologies evaluated. User needs for agricultural and rural statistics were assessed against the background of the national development plans, and data gaps were identified. The national capability to produce the required statistics was also assessed. This sets the scene for the formulation of the SPARS, which is presented in this chapter.

The SPARS for Lao PDR has been prepared based on the NSDS methodology (PARIS21, 2004; PARIS21, 2007), using FAO guidelines for the development of a SPARS (FAO, 2014b). The SPARS has several elements:

- The vision for the agricultural and rural statistics system provides a concise statement of the desired future state of agricultural and rural statistics in the country.
- The mission statement concisely outlines how the government will go about realizing the defined vision.
- The strategic goals show the overall accomplishments to be achieved.
- The outputs show what will be produced to achieve the stated goals.
- The activities describe the specific actions necessary to deliver the stated outputs.

The SPARS activities are presented in an action plan, which sets out what needs to be done, by whom, when, and at what cost. A calendar of censuses and surveys is also prepared to support the action plan. A financing strategy for the action plan is also provided, including the use of national and external funding sources. An M&E plan for monitoring, reviewing, reporting and evaluating the implementation of the SPARS is also presented.

The development of the SPARS in Lao PDR took into account the need to integrate it into the NSDS framework and the existing action plan for agricultural and rural statistics that is part of the ARS. As noted in Section 1.6, the NSDS for Lao PDR has seven goals, nine objectives and four strategies. The SPARS has been integrated into the NSDS at the strategy level. There are no specific SPARS activities under the fourth NSDS strategy. The remaining three NSDS strategies have been defined as the SPARS strategic goals.

In formulating the SPARS, the aim was to further develop the ARS, rather than produce a whole new action plan. The ARS specifies the impact and outcome, and defines seven outputs and associated activities. The ARS impact and outcome statements have been modified to fit in with the SPARS concepts of vision and mission. The SPARS outputs are the same as the seven ARS outputs, organized under the appropriate strategic goal.

In the ARS, all statistical development work is covered under the output "good and appropriate data collection methods are adopted". The SPARS aims to provide more technical detail on the required statistical development work. Therefore, in the SPARS, this output has been

sub-divided into ten sub-outputs corresponding to specific areas of statistical development, such as the agricultural census and agricultural prices. The activities under each output in the SPARS action plan are based on the ARS, but provide more detail on the work to be carried out. The timetable of activities given in the ARS has been revised.

3.1 Vision and mission

Vision

A sustainable system for agricultural and rural statistics that meets international standards, supporting informed decision making in the agricultural sector.

Mission statement

To implement a sustainable agricultural and rural statistics system that provides comprehensive, timely, transparent and reliable data using up-to-date methods for the collection, processing and dissemination of statistics.

3.2 Strategic goals and outputs

Goal 1: Improving regulation and institutional frameworks for agricultural and rural statistics.

Output 1.1. Effective coordination mechanisms among agricultural and rural statistics stakeholders established.

Output 1.2. Adequate number staff in agricultural and rural statistics hired.

Goal 2: Developing statistical infrastructure for agricultural and rural statistics.

Output 2.1. Adequate training programmes developed and implemented.

Output 2.2. Adequate data collection equipment and support mechanisms made available.

Goal 3: Managing and developing agricultural and rural statistics.

Output 3.1. Uniform standards, concepts and methods for agricultural and rural statistics developed and applied across all districts and government agencies.

Output 3.2. Good and appropriate data collection methods adopted.

Sub-outputs

3.2.1 Required agricultural and rural indicators are produced and additional indicators developed.

3.2.2 Sound methodology for the estimation of value added for the agricultural sector is developed and implemented.

3.2.3 Improved administrative reporting system for agricultural and rural statistics implemented.

3.2.4 Master sample frame for agricultural surveys established.
3.2.5 Third agricultural census conducted and results disseminated.
3.2.6 Regular crop condition reports prepared and disseminated.
3.2.7 Improved system for crop production statistics implemented.
3.2.8 Programme of agricultural sample surveys implemented and results disseminated.
3.2.9 Statistical system for agricultural prices implemented.
3.2.10 Improved food balance sheets published.

Output 3.3. Data dissemination system developed and applied.

3.3 Implementation

3.3.1 Implementation arrangements

CAS will have the primary responsibility for implementing the SPARS. A SPARS coordinator will be appointed from within CAS to oversee the SPARS implementation, under the overall guidance of the SCA and the technical direction of the TWA. LSB will provide technical support to CAS as needed. CAS will collaborate with MAF's technical departments, PAFOs and DAFOs in carrying out SPARS activities.

3.3.2 Action plan

The action plan for implementing the SPARS is illustrated in Annex VIII. It shows activities for each output and sub-output, together with who is responsible for the activity, when the activity is scheduled, and the inter-relationships between activities. For the first two years of the SPARS implementation (2016 and 2017), the action plan details activities undertaken in each quarter. For the remaining years, only a broad description of activities for each year is given. Detailed annual action plans will be prepared as part of the SPARS annual reports for endorsement by the SCA.

The main activities in 2016 and 2017 will be:

- Output 1.1. Review LSB and MAF field practices; develop coordination proposals; and revise the agricultural component of the village book.
- Output 1.2. Review the organizational structure of CAS and statistics units in MAF technical departments; and prepare functional statements and job descriptions.
- Output 2.1. Prepare staff development plans for agricultural statistics staff in CAS, MAF's technical departments, PAFOs and DAFOs; and evaluate options for in-country training including NUOL, agricultural colleges, NAFRI and CAS.
- Output 2.2. Evaluate the local to central level data transfer system and prepare an ICT plan for improving data transfer.
- Output 3.1. Evaluate and document the administrative reporting system; review concepts and methods used for data reporting; and prepare a manual on standards, concepts and methods in agricultural statistics.

- Output 3.2.
  - Prepare a revised list of indicators for the agricultural sector.
  - Introduce a new administrative reporting system in selected provinces as a prelude to implementing an improved system nationwide.
  - Begin to prepare and publish monthly crop condition reports.
  - Evaluate previous work done in CAS on crop cutting surveys; conduct a national rice crop cutting survey and compare the results with the existing administrative data; and develop a plan for introducing ongoing crop cutting surveys.
  - Begin development of a national livestock and fisheries production survey.
  - Develop a methodology for agricultural prices statistics and implement it in selected areas.
  - Evaluate data sources for the food balance sheet.
- Output 3.3. Prepare and publish an improved Agricultural Statistics Yearbook; prepare a data dissemination plan; develop the CAS website to facilitate data dissemination; begin to publish data on the CAS website; and continue work on preparing the Agricultural Atlas.

3.3.3 Calendar of censuses and surveys

The SPARS for Lao PDR envisages an improved administrative reporting system for agricultural statistics, with a programme of agricultural censuses and surveys to supplement the administrative data. The proposed calendar of censuses and surveys is shown in Table 1. This should be regularly reviewed during SPARS implementation.

Table 1: Calendar of agricultural censuses and surveys, Lao PDR

Activity	Year										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ADMINISTRATIVE REPORTING											
Improved reporting system			X	X	X	X	X	X	X	X	X
CENSUSES AND SURVEYS											
Census of Population and Housing	X										X
Agricultural Census					X						
Rice Crop Cutting Surveys			X	X	X	X	X	X	X	X	X
Crop Cutting Surveys for Other Crops							X	X	X	X	X
Livestock/Fisheries Production Survey				X					X		
Rice Cost of Production Survey						X					X
Household Forestry Survey							X				
Unspecified Survey								X		X	
Agricultural Price Survey		X	X	X	X	X	X	X	X	X	X

Features of the calendar are:

- A national rice crop cutting survey will be done in 2017 to test and evaluate the methodology. The surveys will be introduced on an ongoing basis from 2019. Crop cutting surveys for other crops will be introduced once the rice crop cutting surveys are sufficiently institutionalized.

- An agricultural price survey will be implemented in selected areas in 2017 and then gradually extended in the following years to become an ongoing national survey.
- The first household survey under SPARS will be the livestock and fisheries production survey in 2018. It is expected that the survey will be repeated every five years.
- The third agricultural census will be undertaken in 2019 (two years earlier than given in the NSDS).
- The cost of production survey for rice will be conducted in 2020 and thereafter every five years.
- The household forestry survey will be undertaken in 2021 and is expected to be repeated every five years.
- The household surveys in 2022 and 2024 are yet to be determined.

3.3.4 Data release calendar

A key element of the SPARS is to improve the dissemination of agricultural and rural statistics to provide users with a wider range of more timely data. All statistics produced by MAF should be formally published, either in printed form or on the Internet. CAS should have primary responsibility in MAF for data dissemination. A data release calendar is needed to ensure the systematic release of data. A tentative data release calendar for CAS is shown in Table 2. This should be regularly reviewed during the SPARS implementation.

Table 2: Centre for Agricultural Statistics: data release calendar

Publication	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Agricultural Statistics Yearbook						x						
Crop Condition/Forecast Report	x	x	x			x	x	x	x			x
Wet Season Crop Statistics (preliminary)										x		
Wet Season Crop Statistics (final)												x
Dry Season Crop Statistics (preliminary)				x								
Dry Season Crop Statistics (final)						x						
Livestock and Fisheries Annual Statistics			x									
Agricultural Price Statistics	x	x	x	x	x	x	x	x	x	x	x	x
Food Balance Sheet									x			
Census/survey reports (irregular)												

3.3.5 Advocacy-communication plan

Statistical advocacy-communication is an important element of the SPARS process. The objectives of the advocacy-communication plan are to:

- Raise awareness amongst planners and policy makers of the importance of statistics for decision making in the agricultural sector;
- Raise awareness amongst data producers and users of the need for sound statistical methodologies for collecting and compiling statistics, and the need for the SPARS for this purpose;

- Promote public confidence in the agricultural and rural statistics system and provide assurances about the quality and objectivity of the data provided; and
- Help in obtaining high-level commitment for the allocation of sufficient national resources to implement the SPARS.

Advocacy is implicit in many of the SPARS initiatives. Steps taken to improve the range, timeliness, quality and accessibility of agricultural and rural statistics should by themselves lead to a greater awareness of the statistics and better use of the data. The SPARS approach in developing the agricultural and rural statistics system in the context of national development plans also reinforces the links between statistics and planning, the relevance of statistics to the key policy issues, and the need for evidence-based planning and policy making. The inclusive approach used in the SPARS development process has already helped to promote the need for the SPARS and the importance of improving the quality of agricultural and rural statistics.

Specific advocacy-communication related activities in the SPARS action plan are:

- Participation in the Sector Working Group on Agriculture and Rural Development. This will help to raise awareness of the SPARS initiative amongst donors. A SPARS presentation has already been made to this Working Group.
- Formation of the SCA. This will provide high-level support for the SPARS implementation and help in securing funding for the SPARS activities.
- Creation of the TWA. This will be useful in bringing together technical experts from all concerned agencies and addressing technical problems in the development of agricultural and rural statistics.
- Consultation with provincial, district and village officials. Local officials will be actively involved in improving the administrative reporting system. These are the key people needed for improving data quality and a strong message will be provided on the need for sound and objective statistical practices.
- Development of the CAS website and agricultural statistics database. Apart from data dissemination, the website will also be useful for SPARS advocacy purposes. Materials such as SPARS information bulletins will be shown on the website to help make users aware of statistical developments and results.
- Improved analysis of data in statistical releases. This will make it easier for users to understand and interpret the data. Documenting data collections in statistical releases and on the CAS website will also help in this regard.
- Holding dissemination workshops for all major statistical releases. This will provide the opportunity to work with users to ensure data are fully utilized. Policy analysis workshops will also be held.

3.3.6 Monitoring and evaluation plan

An M&E plan is needed to ensure the successful implementation of the SPARS. The main objectives of the M&E system are to ensure that the strategic goals of SPARS are achieved and to track SPARS inputs, activities and outputs. In this way, stakeholders will be able to assess whether

the SPARS implementation is on course, and the SCA will be able to take corrective action to ensure that performance targets are met.

The M&E system for the SPARS in Lao PDR is based on a logical framework, and is given in Annex IX. The logical framework sets out the SPARS vision, goals, outputs and activities, and shows the assumptions/risks associated with implementing the strategy. Indicators are defined for each element to measure the success of the SPARS implementation. For each indicator, the status in the baseline year (2015) is shown, together with targets for the end of the NSDS (2020) and for the end of the SPARS (2025). Data sources for the indicators are also shown.

CAS will prepare an annual report to provide an update on progress in implementing the SPARS action plan, highlighting issues that could affect the delivery of outputs or the achievement of the strategic goals. The report will include information on:

- Activities carried out and outputs produced during the year;
- Progress on the action plan and whether timetables are being met;
- Funding of SPARS activities during the year;
- An updated action plan and financing plan for the following year; and
- Problems/issues that need to be addressed, as well as proposed solutions.

The annual report will be submitted to the SCA for consideration at its annual meeting. The SCA should review progress and endorse the action plan and financing plan for the following year.

A mid-term evaluation will be carried out in 2020, coinciding with the final evaluation of the NSDS. CAS, with support from the TWA and national/international consultants as needed, will prepare a mid-term evaluation report. The report will assess the SPARS performance against the targets for 2020, taking into account the final evaluation of the NSDS. Adjustments to the inputs, activities or outputs necessary to achieve the SPARS goals will be proposed.

A final evaluation will be undertaken in 2025. CAS, with support from the TWA, national/international consultants and other personnel as needed, will prepare the final evaluation report. The report will assess the achievements of the SPARS against the targets, and the contribution of the SPARS towards the strategic goals and vision for agricultural and rural statistics. The final evaluation should also document lessons learned and make recommendations on further developments in the agricultural and rural statistics system.

3.3.7 Financing

To successfully implement the SPARS action plan, it will be necessary to mobilize considerable resources, both national and external. The costs of staffing and other overheads in MAF's various statistical units will be financed by the government. External resources will be used for technical assistance, the development of new statistical methodologies, staff training and equipment. External support will also be needed to help introduce new data collections, but the government will progressively take over the costs of these collections as they become part of the regular data collection programme. External resources will also be required for the once per 10 years agricultural census.

The estimated cost of implementing the SPARS for the first five years, 2016-2020, is shown in Annex X. Costs are presented under five headings: salaries, staff development and training, data collection costs, other SPARS development activities, and administration. The contribution needed from both national and external resources is also shown. The costs shown are indicative estimates only: precise costing will be shown in the annual financial plans prepared by CAS as part of the annual SPARS implementation report.

The total cost of the SPARS implementation for the period 2016-2020 is estimated at 82.1 billion kips. Excluding staff salaries, the cost is estimated at 51.1 billion kips, of which only 8.2 billion kips will be funded by the government (see Table 3).

Table 3: Estimated cost of SPARS 2016-2020 (excluding salaries) by source of funds

Source of funds	2016	2017	2018	2019	2020	2016-2020
TOTAL COST (million kips)	1,617	6,510	12,629	19,412	10,979	51,148
Funded by government	400	805	1,280	3,745	1,965	8,195
Funded from external sources	1,217	5,705	11,349	15,667	9,014	42,953
EXTERNAL FUNDS ('000 US$)	150	703	1,399	1,931	1,111	5,294

Currently, the government provides about 400 million kips per year for agricultural statistics work, excluding salaries. The financing plan foresees that government funding will progressively increase during the first five years of SPARS implementation as new statistical methodologies become regularized. The government will also need to make significant resources available in 2018 and 2019 for the agricultural census.

External funding required over the five-year period is estimated at US$ 5.3 million. Nearly 40 percent of this is for the agricultural census. Various funding options might be available. The international development community and bilateral agencies have successfully worked in agricultural statistics in the past. Some have initiated work in areas that will be followed up in the SPARS implementation, such as crop cutting surveys. Various international statistical capacity building programmes are available, including project aid and statistical development funds. The GS might also provide opportunities.

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ANNEX I
COMPOSITION AND TERMS OF REFERENCE FOR STEERING COMMITTEE ON AGRICULTURAL AND RURAL STATISTICS

The Steering Committee on Agricultural and Rural Statistics (SCA) represents the SPARS process owner in Lao PDR, providing overall guidance on the development of the SPARS and recommending it to the government for implementation.

The SCA has been established by MAF, with the Director-General, DOPC as its chair and Deputy Director-General level officers from major stakeholder organizations as its members. It has the following members:

1. Director-General, DOPC (chair)
2. Deputy Director-General, DOPC (responsible for agricultural statistics)
3. Deputy Director-General, LSB (responsible for agricultural statistics)
4. Deputy Director-General, DOA, MAF
5. Deputy Director-General, DLF, MAF
6. Deputy Director-General, DOF, MAF
7. Deputy Director-General, DALAM, MAF
8. Deputy Director-General, DOI, MAF
9. Deputy Director-General, DAEC, MAF
10. Deputy Director-General, NAFRI, MAF
11. Deputy Director-General, MONRE
12. Deputy Director-General, Department of Planning and Cooperation, MOIC

The Secretariat for the SCA meetings is located in CAS. During the implementation phase of the SPARS, the SCA will meet annually to monitor progress and endorse annual work plans.

The Terms of Reference of the SCA are:

- Endorse the final SPARS document, making sure that it is aligned with national policy and development priorities and the NSDS;
- Make recommendations to the government on financing arrangements for SPARS implementation through government and donor funds;
- Monitor and review SPARS implementation progress and endorse annual work plans;
- Ensure integration of SPARS activities in the national development plans of the respective MAF departments;
- Provide guidance and supervision to the TWA in implementing the SPARS; and
- Validate the SPARS mid-term and final reviews and oversee preparation of the next generation of SPARS.

ANNEX II
COMPOSITION AND TERMS OF REFERENCE FOR TECHNICAL WORKING GROUP ON AGRICULTURAL AND RURAL STATISTICS

The Technical Working Group on Agricultural and Rural Statistics (TWA) provides technical guidance on overall SPARS development and implementation. It acts as a think tank, establishing a broad vision for the agricultural statistics system and providing professional guidance on technical matters.

The TWA is chaired by the Deputy Director-General DOPC, who is also a member of the SCA. The work of the TWA is coordinated by CAS, assisted by international and national consultants. Its membership comprises Director or Deputy Director level officers from the major stakeholder organizations. Members of the TWA are:

1. Deputy Director-General, DOPC (chair)
2. Director, CAS
3. Director/Deputy, LSB (responsible for agricultural statistics)
4. Director/Deputy, Planning and Cooperation Division, DOA, MAF
5. Director/Deputy, Planning and Cooperation Division, DLF, MAF
6. Director/Deputy, Planning and Cooperation Division, DOF, MAF
7. Director/Deputy, Planning and Cooperation Division, DALAM, MAF
8. Director/Deputy, Planning and Cooperation Division, DOI, MAF
9. Director/Deputy, Planning and Cooperation Division, DAEC, MAF
10. Director/Deputy, Information Centre, NAFRI, MAF
11. Director/Deputy, Planning Division, DOPC, MAF
12. Director/Deputy, Information Division, Permanent Secretary Office, MAF
13. Head/Deputy of Statistics and Information Centre, MOIC

The Terms of Reference of the TWA are:

- Provide technical support to CAS for SPARS implementation;
- Assist in documenting the existing agricultural statistics system and assess methodological weaknesses, timeliness, statistical standards, data gaps, duplication and data quality;
- Evaluate alternative approaches to improve the quality, timeliness and relevance of agricultural statistics and assist in prioritizing activities to improve the agricultural statistics system within the SPARS framework;
- Prepare a field manual for the administrative reporting system for agricultural statistics that sets out statistical standards and procedures for the reporting of data, including data collection/reporting methods, reporting forms, concepts and definitions, a reporting timetable and data transmission; and
- Assist in developing annual work plans for the implementation of the SPARS.

ANNEX III
VISION, GOALS AND TARGETS OF THE AGRICULTURE DEVELOPMENT STRATEGY[9]

Vision to 2030

Ensuring food security, producing comparative and competitive potential agricultural commodities, developing clean, safe and sustainable agriculture and shifting gradually to the modernization of a resilient and productive agriculture economy that links with rural development in contributing to the national economic basis.

Overall goals

(1) Economy has strongly grown in line with industrialization and modernization direction, comprehensive infrastructure, ensuring economic growth at the constant level, effective, stable and ensuring food security and strongly ensures quality in terms of nutrition, producing agricultural products with quantity and quality that are highly competitive as well as are adaptable to climate change.

(2) Agriculture production is in line with sanitary principles, clean, safe for producers and consumers health and environmentally friendly.

(3) Agriculture production has made contribution in many aspects such as creation of employment, income generation for people, reduction of gap between cities and rural areas, construction new rural areas along side with the protection of symbolic cultures of all ethnic people, environmental protection and contribute to stability and balance of ecological system.

Targets by 2020

By 2020, the Gross Domestic Product of Agriculture and Forestry Sector to grow at the average rate of 3.4 percent, contributing to the national economic structure at the rate of 19 percent.

To ensure nutrition of people to get energy of at least 2 600 Kcal per person per day, which includes rice and starch covering approximately 62 percent; meat, eggs and fish approximately 10 percent; vegetables, fruits and beans covering approximately 6 percent and fat, sugar and milk approximately 22 percent. In order to ensure such energy, each type of food shall be ensured for annual consumption with at least as the following:

- Milled rice 160 kg/person/year (or equivalent to 280 kg of paddy rice/person/year).
- Flour 5 kg/person/year.
- Meat, fish and eggs in total 65 kg/person/year; this includes pork 13 kg/person/year, poultry meat 9 kg/person/year and other meat 7 kg/person/year, eggs 6 kg/person/year and fish 30 kg/person/year.
- Vegetables 50 kg/person/year.

[9] Extracted from *Agriculture Development Strategy to 2025 and Vision to 2030* (MAF, 2015).

- Legumes/beans - sesame (dried) 2 kg/person/year.
- Sweet corn 2.5 kg/person/year.
- Tuber/ground roots (taro, potatoes, etc.) 2.5 kg/person/year.
- Fruits 30 kg/person/year.
- Sugar 1 kg/person/year.
- Milk 3 kg/person/year.
- Fat/oil 23 kg/person/year.

In order to meet such requirement, it is necessary to produce and supply sufficient rice, vegetables, legumes/beans-sesame, fruits, sugar, meat/fish and eggs which shall focus on the production of the following main food:

(1) Total paddy rice production shall reach 4.7 million tonnes including glutinous rice cover 70 percent and non-glutinous rice 30 percent, with the average production growth rate 5 percent by 2020 (mainly the increase of productivity along with the expansion of areas according to actual capacity). Details are as follows:

- Paddy rice for food security about 2.5 million tonnes including:
  - Paddy rice for consumption 2.1 million tonnes *(7.5 million people x 280 kg of paddy rice/person/year)*.
  - Rice reserve 400 000 tonnes (milled rice 240 000 tonnes; covering 2-3 months).
- Rice seeds approximately 100 000 tonnes.
- Rice for domestic processing 500 000 to 600 000 tonnes.
- Rice for domestic sale and export not less than 1 million tonnes.

(2) Production of vegetables, legumes/beans, sesame and fruits for consumption including sweet corns about 228 000 tonnes, taro/potatoes about 304 000 tonnes, fruits about 800 000 tonnes and other crops about 1.5 million tonnes.

(3) Production of meat, fish and eggs about 487 500 tonnes (including meat and eggs 262 500 tonnes, fish and aquatic animals 225 000 tonnes per year) to meet average consumption of 65 kg/person/year. These include 70 kg/person/year in urban area and 50 kg/person/year in rural area. The GDP growth rate for the livestock sector should be about 6 percent per year; the fisheries sector should grow by 8-10 percent per year.

Targets by 2025

Continue ensuring that per capita energy intake is not less than 2 600 Kilocalories per person, this includes rice and starch covering 54 percent, meat, eggs and fish about 13 percent, vegetables, fruits and legumes/beans covering 8 percent; and fat, sugar and milk covering 25 percent by ensuring that each type of food for consumption each year at least as the following:

- Milled rice 140 kg/person/year (or equivalent to 234 kg of paddy rice/person/year).
- Starch 4.5 kg/person/year.
- Meat, fish and eggs 79 kg/person/year; this includes pork 18 kg/person/year, poultry meat 10 kg/person/year and other meat 10 kg/person/year, eggs 8 kg/person/year and fish 33 kg/person/year.
- Vegetables 80 kg/person/year.

- Legumes/beans - sesame (dried) 2 kg/person/year.
- Sweet corn 2 kg/person/year.
- Tuber/ground roots (taro, potatoes, etc.) 2.1 kg/person/year.
- Fruits 40 kg/person/year.
- Sugar 1.5 kg/person/year.
- Milk 5 kg/person/year.
- Fat/oil 25 kg/person/year.

In order to meet such requirement, the following is needed:

(1) Total paddy rice production shall reach 5 million tonnes of which glutinous rice 70 percent and non-glutinous rice 30 percent with the following details:

- Rice for food security about 2.5 million tonnes (paddy) including:
  - Paddy rice for consumption about 2.1 million tonnes *(9 million people x 234 kg of paddy rice/person/year).*
  - Rice reserve 400 000 tonnes (or milled rice 240 000 tonnes; self-sufficient 2-3 months).
  - Rice seeds about 100 000 tonnes.
- Paddy rice for domestic processing about 500 000 to 600 000 tonnes
- Paddy rice for domestic sale and export at least 1.5 million tonnes.

(2) Production of vegetables, legumes/beans-sesame and fruits for consumption including sweet corns about 306 000 tonnes, beans and taro, potatoes about 327 000 tonnes, fruits about 825 000 tonnes and other crops about 1.57 million tonnes.

(3) Production of meat, eggs and eggs about 711 000 tonnes (including meat and eggs 414 000 tonnes, fish and aquatic animals 297 000 tonnes per year) to meet total average consumption rate 79 kg per person per year.

ANNEX IV
NATIONAL SOCIO-ECONOMIC DEVELOPMENT PLAN 2016-2020, OBJECTIVE, OUTCOMES AND OUTPUTS[10]

Overall objective

Continued political stability, peace and order in the society; the poverty of the people is reduced significantly in all areas; the country is developed out of the status of Least Developed Country by 2020 through continuous, inclusive and sustainable growth; maximum effective management and utilization of natural resources; the development enhanced through the national potentials and advantages; participated in regional and international integration with ownership.

Outcomes and outputs

Outcome 1: Continued, firm and inclusive growth by consolidating strong economic foundations and reducing economic vulnerability.

Output 1 – Sustained and inclusive economic growth

Output 2 – Macro-economic stability

Output 3 – Integrated development planning and budgeting

Output 4 – Balanced regional and local development

Output 5 – Improved public/private labour force capacity

Output 6 – Local entrepreneurs are competitive in domestic and global markets

Output 7 – Regional and international cooperation and integration

Outcome 2: Human resources are developed and the capacities of the public and private sectors is upgraded; poverty in all ethnic groups is reduced, all ethnic groups and both genders have access to quality education and health services; the unique culture of the nation is protected and consolidated; political stability, social peace and order, justice and transparency are maintained.

Output 1 – Improved living standards through poverty reduction

Output 2 – Ensured food security and reduced incidences of malnutrition

Output 3 – Access to high quality education

Output 4 – Access to high quality health care and preventative medicine

Output 5 – Enhanced social welfare

Output 6 – Protection of traditions and culture

Output 7 – Ensured political stability, order, justice and gender equality

[10] Extracted from *Five-Year National Socio-Economic Development Plan VIII (2016-2020)* – 24 November 2015 draft.

Outcome 3: Natural resources and the environment are effectively protected and utilized according to green-growth and sustainable principles; there is readiness to coping with natural disasters and the effects of climate change and for reconstruction following natural disasters.

Output 1 – Environmental protection and sustainable natural resources management

Output 2 – Preparedness for natural disasters and risk mitigation

Output 3 – Reduced instability agricultural production

Priority cross-cutting outputs

(1) Promote local innovation and use of science, technology and telecommunications and management and application of ICT.

(2) Promote and develop gender equality, juvenile and youth.

(3) Enhance effectiveness for the public governance and administration.

ANNEX V
STRATEGY FOR THE DEVELOPMENT OF THE NATIONAL STATISTICS SYSTEM 2010-2020[11]

Vision

- Strengthen the development of the national statistical system to attain the international standard while maintaining coherence with the Party and the Government's polices to assure good national statistics.
- Ensure the comprehensive, timely, transparent and reliable supply of good quality socio-economic and environment statistics to meet the increasing demand from the Party, Government and other statistics users; to serve as an indication for monitoring, evaluation and formulation of socio-economic development; and for monitoring progress of the MDGs by 2015 and graduation from Least Developed Country status by 2020.

Goals

(1) To provide good quality, reliable, and timely statistics to serve and facilitate planning and decision making activities of policy makers, plan formulators and domestic as well as foreign researchers.

(2) To develop the national statistical system to guarantee that all statistical activities ranging from production to dissemination are comparable and in compliance with international standards. In other words, it is to ensure that actual situation of the country is reflected scientifically as a result of technical efforts.

(3) To build and enhance knowledge and capacity of staff and statisticians in the nationwide national statistical system, so that they can become more skilful in statistics to meet statistical development needs in each time period.

(4) To establish an efficient and effective coordination mechanism which will make the cooperation between horizontal and vertical organizational systems become realized and systematic particularly in term of collecting, summarizing, analyzing data, building databases, exchanging and disseminating data. In addition, this is to avoid duplication that can lead to a waste of time and budget, specifically those activities under government.

(5) To encourage, support, and provide assistance to all data producers to produce high quality statistics through raising their awareness of the core value, role and duty, right and responsibility in supplying statistics to allow users make use of data most effectively, conveniently, and punctually. To encourage studies and analysis of data to avoid use inconsistent with statistical principles.

(6) To expand statistical cooperation with neighbouring countries and countries in ASEAN, the Asian region, and the rest of the world based on the direction given by the leading party and government in opening for mutually beneficial cooperation.

[11] Extracted from *The Strategy for the Development of the National Statistical System, 2010-2020* (LSB, 2010).

(7) To encourage every member in the society to fulfil their obligation in providing cooperation and statistical data, financial contribution and contributing knowledge through giving feedback and comments on statistical works.

Objectives

(1) Upgrade the Decree No. 140/PM dated on August 28, 2002 regarding organizational structure and operation of national statistical system into a Statistics Law in fiscal year 2010-2011.

(2) Improve and develop the national statistical system by improving its organizational structure and establish a comprehensive and systematic centralized system of vertical organizational networks, from central to village levels, by 2015. Establish a vertical, centralized statistical system in which LSB under the umbrella of MPI which will have statistical divisions, units, and teams in provincial and district levels and will have statistical staff at village level. At the same time, strengthen statistical works in the horizontal system of organizational network (provinces and sectors) for harmonized coordination.

(3) In order to ascertain a successful implementation of the national statistical system, numbers of statistical staff need to be increased to 1 400 by 2020 (this includes statistical staff in various divisions and units at provincial level), in which:

- Numbers of staff in LSB increase from 59 at present to 160 by 2015 and to 200 by 2020.
- Numbers of statistical staff in each ministry should on average be 6 to 10 people, particularly in big ministries such as MAF, the Ministry of Education, and the Ministry of Health.
- Numbers of statistical staff in each province should on average be 6 to 10 people at provincial level.
- Numbers of statistical staff in each district should on average be 4 to 6 staff at district level.

(4) Improve and develop a horizontal statistical system (ministries and ministry-equivalent organizations); create information exchange network with the coverage of 40 percent of all main statistical producers by 2015 and 70 percent by 2020.

(5) Increase production of socio-economic and environment statistics to be more comprehensive with high quality and suitability, and to enable the production of official statistical indicators that have been determined. In addition, studies and consultation among relevant organizations on potential production of new types of statistics should be continuously carried out, taking into account sources, to meet the increasing demand of statistics in each period.

5.1 National Indicators:
- Produce at least 200 main indicators by 2015
- Produce at least 300 main indicators by 2020

5.2 Sector Indicators:
- Produce at least 400 main indicators by 2015
- Supply at least 550 main indicators by 2020.

5.3 Provincial Indicators:
Along with the production of national and sector indicators, it is crucially necessary that those indicators be appropriately broken down into provincial level. To achieve this, all the production processes, namely survey design, data collection and sample design, must take into account assurance of accuracy of provincial statistics.

(6) Strive to successfully conduct all planned large-scale and sample surveys which serve as the basis for the production of official statistics, which in turn facilitates socio-economic development plan formulation, MDGs progress evaluation and poverty assessment in each period as follows:

6.1. From 2010-2015

- Fourth Population and Housing Census in 2015
- Second Economic Census in 2012
- Second Agricultural Census in 2011
- Fifth Household Consumption and Expenditure Survey in fiscal year 2012/2013
- Annual Household Survey from 2010 to 2015
- Quarterly Enterprise Survey from 2010 to 2015
- Labour Survey in 2010 and 2015
- Lao PDR Social Indicator Survey which will be the result of combining two surveys (Multiple Indicators Cluster Survey and Reproductive Health Survey) in 2010 and 2015
- Vital Registration from 2010 to 2015
- Annual Village and Household Registration from 2010 to 2015
- Population Count in 2010
- Annual Village Statistics and Poverty Survey from 2010 to 2015
- Annual Enterprise Registration Statistics
- Conduct other surveys that are necessary, including Environment and Stability statistics. Additional detail should be obtained from consultation with relevant organizations during the actual implementation of strategy.

6.2. From 2016 to 2020

Continue carrying out large-scale surveys that have been conducted during 2010-2020. If it is necessary, time frame as well as content might be adjusted according to the changing demand of the party and government in each period. The main surveys include:

- Third Economic Census in 2017
- Sixth Household Consumption and Expenditure Survey in fiscal year 2017/2018
- Annual Household Surveys from 2016 to 2020
- Quarterly Enterprise Surveys from 2016 to 2020
- Labour Survey in 2020
- Lao PDR Social Indicator Survey which will be the result of combining two surveys (Woman and Child Health Survey and Reproductive Health Survey) in 2020
- Vital Registration from 2016 to 2020
- Annual Village and Household Registration from 2016 to 2020
- Population Count in 2020
- Annual Village Statistics and Poverty Survey from 2016 to 2020
- Other necessary surveys, particularly surveys that are related to Environment and Stability and their development status.

(7) Formulate capacity building work plans to enhance, through various methods, staff's knowledge in basic statistics and statistical management throughout the whole national statistical system in two periods, 2010-2015 and 2015-2020. Encourage staff to enhance their educational qualification. At least three staff a year, or 30 staff in ten years, should upgrade to diploma, bachelor's degree and master's degree; and at least staff should obtain doctoral degree in 10 years.

(8) Registration statistics need to be improved and adjusted annually. By the end of the strategy's implementation period, the appropriate registration system should be established officially and will be an official registration system used in Lao PDR.

(9) Develop technological infrastructure and communication equipment which are up-to-date, durable, and can link vertical and horizontal organizational networks taking into account the e-government project.

Strategies and Work Programmes (WPs)

(1) Improving Regulation and Institutional Frameworks

WP 1: Establish and implement Statistics Law, and move toward scientifically sound statistical production.

WP 2: Improve the national statistical system's organizational structure both horizontally and vertically (i.e. at both central and local levels) including recruitments and placements of staff in all statistical offices at each level to ensure smooth statistical works in each period.

WP 3: Establish mechanisms and methods to improve statistical literacy and encourage every member in the society to participate, with high responsibility, in statistical activities.

WP 4: Upgrade knowledge, capacities, and skills of statisticians in order to enable them to become experts with experiences and skills that are comparable to international standards.

WP 5: Encourage and promote the allocation of financial resources into statistical production in order to secure a certain level of budget that allows statistical activities to take place.

WP 6: Recognize and value the roles of coordination in avoiding duplication, and waste of budget/resources and time.

(2) Developing Statistical Infrastructure

WP 7: Create and develop infrastructure and supporting environment to facilitate all statistical works from a notion of necessary use to efficiently sufficient use. This also includes the construction of Information Technology infrastructure to support the implementation of the national statistical system's network system plan.

WP 8: Support the applications and adaptation of international standards, methodologies and classification systems according to actual conditions of the country.

(3) Management and development of data

WP 9: Boost the production and development of sector and periodical indicators with high quality and creditability. Focus on statistical services to ensure, with high responsibility, the timely supply of data in various forms.

WP 10: Improve dissemination and exchange of statistics. Enlarge official statistics database, strengthen data protection, and increase varieties of formats to make it easy for users to understand and use them statistically correctly.

(4) Ensuring Statistical Activities

WP 11: Create conditions and environment to facilitate statistical activities. Protect and preserve all statistical data in the networks to avoid loss of data and their confidentiality.

WP 12: Cooperate regionally and internationally to strengthen statistical management and expertise, to share experiences, to increase access to potential sources of financial and technical assistance, and to integrate into international standards.

ANNEX VI
MINIMUM SET OF CORE DATA ITEMS FOR LAO PDR

Variable group	Items	Detail required	Data needed	Frequency	Source
ECONOMIC DATA					
Output[1]	Rice	District by irrigated and rain-fed	Area	Seasonal	CAS, DOA: admin. data
			Production, yield	Seasonal	CAS, DOA: crop cutting surveys
	Maize	Province	Area	Seasonal	CAS, DOA: admin. data
			Production, yield	Seasonal	CAS, DOA: crop cutting surveys
	Sugar cane	Province	Area	Seasonal	CAS, DOA: admin. data
			Production, yield	Seasonal	CAS, DOA: crop cutting surveys
	Soya bean	Province	Area	Seasonal	CAS, DOA: admin. data
			Production, yield	Seasonal	CAS, DOA: crop cutting surveys
	Cotton	Province	Area	Seasonal	CAS, DOA: admin. data
			Production, yield	Seasonal	CAS, DOA: crop cutting surveys
	Milk	Province by cattle/ buffaloes	Production	Annual	CAS, DLF: admin. data & surveys
	Eggs	Province	Production	Annual	CAS, DLF: admin. data & surveys
	Meat	Province by cattle/ goats/pigs/poultry	Production	Annual	CAS, DLF: admin. data & surveys
	Capture fisheries	National	Production	Annual	CAS, DLF: admin. data & surveys
	Aquaculture	National	Production	Annual	CAS, DLF: admin. data & surveys
	Forestry: wood	National by type of timber product	Area under forests, production	Annual	CAS, DOF: admin. data & other sources
	Forestry: non-wood	National by type of product	Production	Annual	CAS, DOF: admin. data & other sources
Trade	Exports of agricultural products	National by commodity	Quantity and value	Annual	Customs Dept.
	Imports of agricultural products	National by commodity	Quantity and value	Annual	Customs Dept.

Variable group	Items	Detail required	Data needed	Frequency	Source
Stock of resources	Land cover and use	National	Area	Irregular	DOF & Agri. Census
	Economically active persons	Province by urban/rural and sex	Number of persons	Triennial	LSB: Labour Force Survey
	Cattle, buffaloes, poultry, goats and pigs	District by type	Number of animals	Annual	CAS, DLF: admin. data & Agri. Census
	Agricultural machinery	National by type	No. of machinery items; no. of farm households using machinery	Decennial	Agri. Census
Inputs	Water used for agricultural purposes	National by crop type	Quantity	Annual	DOI: admin. data
	Fertilizer use	National by fertilizer type and crop type	Quantity and value	Decennial	Agri. Census
	Pesticide use	National by type	Quantity and value	Decennial	Agri. Census
	Crop inputs	National by type of input and crop type	Quantity and value	Quin-quennial	CAS, DOA: cost of production surveys
	Livestock inputs	National by livestock type	Quantity and value	Quin-quennial	CAS, DLF: cost of production surveys
	Fisheries inputs	National by input type and type of fisheries	Quantity and value	Quin-quennial	CAS, DLF: cost of production surveys
Agro-processing	Crop products used in processing food	National by crop type	Quantity	Annual	MOIC
	Livestock products used in processing food	National by livestock type	Quantity	Annual	MOIC
	Fisheries products used in processing food	National by type	Quantity	Annual	MOIC
Prices	Farm-gate prices	National by core crops/livestock/ fisheries products	Average price	Monthly	CAS
	Consumer prices	National by core crops/livestock/ fisheries products	Average price	Monthly	LSB
Final expenditure	Government expenditure on agriculture and rural development	National by sub-sector	Amount	Annual	Budget documents
	Agricultural subsidies	National by sub-sector	Amount	Annual	Budget documents
	Household consumption	National by core crops/livestock/ fisheries products	Quantity and value	Triennial	LSB: LECS

Variable group	Items	Detail required	Data needed	Frequency	Source
Rural infrastructure	Area equipped for irrigation	National	Area	Annual	DOI
	Rural roads	National	km	Annual	Ministry of Public Works and Transport
International transfer	Official development assistance for agriculture and rural development	National	Value	Annual	Budget documents
SOCIAL DATA					
Demographics of urban and rural population	Sex by age	District	No. of persons	Decennial	LSB: Census of Pop. & Housing
	Household composition	District	No. of households	Decennial	LSB: Census of Pop. & Housing
	Highest level of education	District by sex	No. of persons	Decennial	LSB: Census of Pop. & Housing
	Labour force status	National by sex (employed, unemployed, not in labour force)	No. of persons	Triennial	LSB: Labour Force Survey
	Status in employment	National by sex (self-employed, employee)	No. of persons	Triennial	LSB: Labour Force Survey
	Economic sector of employment	National by sex (based on ISIC)	No. of persons	Triennial	LSB: Labour Force Survey
	Occupation of employment	National by sex (based on ISCO)	No. of persons	Triennial	LSB: Labour Force Survey
	Household income	District	Value	Triennial	LSB: LECS
	Number of hired workers on farm holdings	Province by sex	No. of persons	Decennial	Agri. Census
	Housing conditions	District	No. of dwellings	Decennial	LSB: Census of Pop. & Housing
ENVIRONMENTAL DATA					
Land	Soil degradation	National			MONRE: special studies
Water	Water pollution due to crops, livestock and fisheries	National			MONRE: special studies
Air	Emissions due to agriculture	National			MONRE: special studies

Variable group	Items	Detail required	Data needed	Frequency	Source
GEOGRAPHIC LOCATION					
GIS coordinates	Administrative units	National, province, district, village		Five-yearly	LSB and others
	Parcels			Decennial	
Degree of urbanization		Classification of villages by urban, and rural		Decennial	LSB: Census of Pop. & Housing

1. The table includes only Global Strategy core items. Non-core crops, especially rubber, coffee and vegetables, also need to be covered by the agricultural statistics system in Lao PDR.

ANNEX VII
SWOT ANALYSIS OF AGRICULTURAL STATISTICS SYSTEM IN LAO PDR

A. OVERALL AGRICULTURAL STATISTICAL SYSTEM

Strengths	Weaknesses
A sound action plan for agricultural and rural statistics to guide further development of the agricultural statistics system.	Reliance on administrative reporting systems for most agricultural statistics.
The Ministerial Decision on the organization of agricultural statistics in MAF.	Village heads, who are the primary source of most agricultural data, report to the DAFOs not to MAF.
The establishment of CAS to manage the agricultural statistics system and the authority provided by the Ministerial Decision on Agricultural Statistics.	Current data dissemination is limited to the *Agricultural Statistics Yearbook*, which does not provide comprehensive or timely data.
Presence of statistical units in technical departments, PAFOs and DAFOs to provide field support for agricultural statistics activities.	Lack of a CAS website to help in data dissemination.
Experience of LSB and CAS in conducting two agricultural censuses; experience of CAS in conducting agricultural sample surveys.	New technology is not fully utilized for data collection, transmission and processing.
Pool of census/survey enumerators with experience in data collection for all types of censuses and surveys.	Vertical/horizontal structure of the statistical system can create problems in duplication or conflicting data for agriculture.
LCA 2010/11 data available to help in compiling current agricultural statistics and constructing sample frames.	Statistical staff at all levels lack skills in statistical methods and database management.
Opportunities	**Threats**
Government priority to statistics as reflected in the enactment of the Statistics Law, the upgrading of LSB, and the increase in LSB staff numbers.	Shortage of government funds for carrying out fieldwork for sample surveys and for field supervision of the administrative reporting system.
Clearly defined responsibilities for agricultural statistics between MAF and LSB provided by the Statistics Law.	Frequent changes in administrative units, especially villages, making it difficult to keep frames up-to-date and to link data from different sources.
The long-term vision for statistics provided by the NSDS.	Institutional barriers to improving the reliability of agricultural statistics.
High level of donor interest in improving agricultural statistics through the GS.	
The availability of up-to-date GIS coordinates for villages and the existence of data dissemination products such as *Lao DECIDE,* providing opportunities to enhance analysis of agricultural statistics and facilitate user access to data.	
The high priority given to agriculture in the NSEDP.	
Improvements in communication infrastructure, facilitating the use of improved data collection and transmission methods.	

B. CROP SUB-SECTOR

Strengths	Weaknesses
Extensive experience of DOA, PAFOs and DAFOs in the collection of crop statistics.	Reliance on administrative reporting systems for crop statistics.
Presence of a Statistics Unit in DOA.	Crop data released in the *Agricultural Statistics Yearbook* are not timely and no crop conditions data are released.
Experience of CAS in conducting crop surveys, especially crop cutting surveys.	Difficulties faced by DOA in reporting crop statistics because other MAF departments are responsible for land and agricultural extension.
Opportunities	**Threats**
The importance of the crop sector to the economy of Lao PDR and its high priority in the NSEDP.	Shortage of government funds.
Donor interest in crop statistics activities.	Greater crop diversification and market orientation in farming practices makes the village head's task of reporting crop conditions more difficult.
Availability of technology such as remote sensing which could be used for crop statistics.	

C. LIVESTOCK AND FISHERIES SUB-SECTOR

Strengths	Weaknesses
Extensive experience of DLF in the collection of livestock and fisheries statistics.	Reliance on administrative reporting systems for livestock and fisheries statistics.
Presence of a Statistics Unit in DLF.	No livestock production statistics are compiled; fisheries data are limited to production by capture and culture fisheries.
Experience of CAS in conducting livestock surveys.	Livestock data released in the *Agricultural Statistics Yearbook* are not timely
	Fisheries data are difficult for village heads to report.
Opportunities	**Threats**
The importance of the livestock and fisheries sector to the economy of Lao PDR and its high priority in the NSEDP.	Shortage of government funds.

D. FORESTRY SUB-SECTOR

Strengths	Weaknesses
Extensive experience of DOF in the collection of forestry statistics.	Reliance on administrative reporting systems for forestry statistics.
Presence of a Statistics Unit in DOF.	Lack of ability to provide sufficient forest data
Opportunities	**Threats**
The forestry sector continues to be important to the economy of Lao PDR and is given high priority in the NSEDP.	Shortage of government funds.

ANNEX VIII

SPARS ACTION PLAN

GOAL 2: DEVELOPING STATISTICAL INFRASTRUCTURE FOR AGRICULTURAL AND RURAL STATISTICS

	Activity	2016				2017				2018	2019	2020	2021	2022	2023	2024	2025	Responsibilities
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Output 2.1: Adequate training programmes developed and implemented																		
1	Develop training and staff development plan for CAS																	CAS
2	Develop training plan for statistics units in MAF departments																	CAS, TWA
3	Develop training plan for local staff																	CAS, PAFOs, DAFOs
4	Establish links with training institutions abroad																	CAS, LSB
5	Evaluate training options in NUOL and agricultural colleges																	CAS, LSB
6	Decide on training modalities and institutions to be involved																	CAS, LSB
7	Establish training facilities																	CAS, other institutions
8	Implement training plans																	CAS, other institutions
9	Conduct policy analysis workshops																	LSB, CAS, MAF
Output 2.2. Adequate data collection equipment and support mechanisms available																		
1	Document data transfer system from local to central level																	CAS, TWA
2	Evaluate KOICA data transfer system																	CAS
3	Assess ICT and connectivity issues to improve data transfer																	CAS, TWA
4	Prepare ICT plan for the local level																	CAS, PAFOs, DAFOs
5	Get SCA endorsement for local ICT plan																	SCA, MAF
6	Seek funds for local ICT plan																	MAF
7	Implement local ICT plan																	CAS, PAFOs, DAFOs
8	Assess computer and other equipment needs for CAS																	CAS
9	Prepare ICT plan for statistics in MAF																	CAS, TWA
10	Get SCA endorsement for MAF statistics ICT plan																	MAF, SCA
11	Seek funds for MAF statistics ICT plan																	MAF
12	Implement MAF statistics ICT plan																	MAF

GOAL 3: MANAGING AND DEVELOPING AGRICULTURAL AND RURAL STATISTICS

	Activity	2016				2017				2018	2019	2020	2021	2022	2023	2024	2025	Responsibilities
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Output 3.1: Uniform standards, concepts & methods on agricultural and rural statistics developed and applied																		
1	Establish and formally constitute the TWA																	MAF
2	Hold regular TWA meetings to help implement SPARS																	CAS, TWA
3	Conduct field study on existing statistical practices																	CAS, TWA, FAO
4	Prepare report documenting existing statistical practices																	CAS, TWA, FAO
5	Review existing concepts, definitions and methods																	CAS, TWA, LSB, FAO
6	Consult technical departments, provinces and districts																	CAS, TWA, FAO
7	Prepare manual on standards, concepts and methods																	CAS, TWA, LSB, FAO
8	Prepare training programme based on the manual																	CAS, TWA, FAO
9	Conduct training for standards in the manual																	CAS, TWA
10	Establish administrative procedures to enforce standards																	MAF, LSB, TWA
Output 3.2: Good and appropriate data collection methods adopted																		
Sub-output 3.2.1: The required agricultural and rural indicators produced and additional indicators developed																		
1	Review SPARS action plan and prepare revised indicator list																	MAF, CAS, LSB, TWA
2	Prepare plan for publishing additional indicators																	TWA, CAS
3	Publish indicators in Agri. Stats. Yearbook																	CAS
Sub-output 3.2.2: Sound methodology for the estimation of value added for the agricultural sector developed and implemented																		
1	Review data sources for national accounts for agriculture																	MAF, CAS, LSB, TWA
2	Review survey programme to meet national accounts needs																	
3	Prepare report on improving agri. data in national accounts																	CAS, LSB, TWA
4	Implement required statistical activities																	CAS, LSB
Sub-output 3.2.3: Improved administrative reporting system for agricultural and rural statistics implemented																		
1	Conduct training for improved system based on Output 3.1																	CAS, TWA
2	Implement improved system based on Output 3.1																	CAS, TWA

Activity	2016				2017				2018	2019	2020	2021	2022	2023	2024	2025	Responsibilities
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Sub-output 3.2.4: Master sample frame for agricultural surveys established																	
1 Create frame for livestock/fisheries production survey																	LSB, CAS
2 Evaluate options for master sample frame																	LSB, CAS
3 Create master sample frame from third agricultural census																	LSB, CAS
4 Use master sample frame for agricultural surveys																	LSB, CAS
Sub-output 3.2.5: Third agricultural census conducted and results disseminated																	
1 Design and develop census																	CAS, LSB, TWA
2 Conduct census																	CAS, LSB
3 Process census and prepare tables																	CAS, LSB
4 Prepare census dissemination products																	CAS, LSB
5 Disseminate census results																	CAS, LSB
Sub-output 3.2.6: Regular crop condition reports prepared and disseminated																	
1 Evaluate information needs of crop condition reports																	CAS, DOA
2 Prepare outline of crop condition report																	CAS, DOA
3 Prepare and disseminate crop condition reports																	CAS, DOA
4 Evaluate alternative forecasting methods for rice																	CAS, DOA
5 Develop and test forecasting methods for rice																	CAS, DOA
6 Implement method of rice forecasting																	CAS, DOA
7 Incorporate rice forecasts into crop condition reports																	CAS, DOA

Activity	2016				2017				2018	2019	2020	2021	2022	2023	2024	2025	Responsibilities
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Sub-output 3.2.7: Improved system for crop production statistics implemented																	
1 Evaluate results of previous work on rice production statistics																	CAS, DOA
2 Develop plan for implementing rice crop cutting surveys																	CAS, DOA
3 Develop rice crop cutting survey methodology																	CAS, DOA
4 Conduct national rice crop cutting survey 2016/17 dry season																	CAS, DOA
5 Conduct national rice crop cutting survey 2017 wet season																	CAS, DOA
6 Process national rice crop cutting survey and prepare results																	CAS, DOA
7 Evaluate results of national rice crop cutting survey																	CAS, DOA
8 Develop plan for regular rice crop cutting surveys																	CAS, DOA
9 Implement ongoing rice crop cutting surveys nationwide																	CAS, DOA
10 Compile/publish rice statistics based on crop cutting surveys																	CAS, DOA
11 Conduct crop cutting surveys for other crops																	CAS, DOA
12 Develop/implement satellite and other methods																	CAS, DOA
Sub-output 3.2.8: Programme of agricultural sample surveys implemented and results disseminated																	
1 Develop livestock/fisheries production survey																	CAS, DLF
2 Collect data for livestock/fisheries production survey																	CAS, DLF
3 Process/tabulate livestock production survey																	CAS, DLF
4 Publish/disseminate livestock production survey results																	CAS, DLF
5 Conduct rice cost of production survey																	CAS, DOA
6 Conduct household forestry survey																	CAS, DOF
7 Conduct other unspecified survey																	CAS, TWA
8 Conduct second livestock/fisheries production survey																	CAS, DLF
9 Conduct second rice cost of production survey																	CAS, DOA

Activity	2016				2017				2018	2019	2020	2021	2022	2023	2024	2025	Responsibilities
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
Sub-output 3.2.9: Statistical system for agricultural prices implemented																	
1 Develop and test methodology for agricultural price statistics																	CAS, LSB
2 Train field staff																	CAS
3 Implement first round agricultural price statistics system																	CAS
4 Implement agricultural price statistics system nationwide																	CAS
Sub-output 3.2.10: Improved food balance sheets published																	
1 Prepare food balance sheet for 2016																	CAS
2 Evaluate data sources for the food balance sheet																	CAS
3 Make recommendations on improvements in the source data																	CAS
4 Prepare food balance sheet for 2017																	CAS
5 Publish 2017 food balance sheet on CAS website																	CAS
6 Review survey programme to meet food balance sheet needs																	CAS
7 Prepare and publish food balance sheets annually																	CAS
8 Implement improvements in data sources																	CAS
Output 3.3: Data dissemination system developed and applied																	
1 Evaluate data sources and content for the Agri. Stats. Yearbook																	CAS
2 Prepare and publish improved 2017 Agri. Stats. Yearbook																	CAS
3 Further develop and publish Agri. Stats. Yearbooks																	CAS
4 Review MAF data release calendar and dissemination plan																	CAS
5 Develop CAS website																	CAS
6 Implement and maintain CAS website																	CAS
7 Prepare Agricultural Atlas																	CAS
8 Prepare and publish documentation for data collections																	CAS
9 Conduct data dissemination workshops at all levels																	CAS
10 Develop agricultural and rural statistics database																	CAS
11 Implement and maintain agricultural and rural statistics database																	CAS
12 Develop data dissemination systems in MAF technical depts.																	CAS, TWA
13 Develop data dissemination systems at local levels																	CAS, PAFOs, DAFOs

ANNEX IX

SPARS LOGICAL FRAMEWORK

SPARS element	Performance indicators	Baseline Year 2015	Target Year 2020	Target Year 2025	Data sources	Assumptions and risks
Vision A sustainable system for agricultural and rural statistics that meets international standards, supporting informed decision making in the agricultural sector.	1. Percent of NSEDP agricultural sector targets met.	–	60%	80%	NSEDP annual reports.	- Agricultural and rural statistics used in policy making. - Government commitment to fund the statistical system.
	2. Annual increase in Government funds for agricultural and rural statistics compared with 2015.	–	20%	20%	Budget documents.	
	3. Number of indicators produced and disseminated according to the data release calendar.	61	80	120	CAS website.	
Mission To implement a systematic agricultural and rural statistics system that provides comprehensive, timely, transparent and reliable data using up-to-date methods for the collection, processing and dissemination of statistics.						
Goal 1 Improving regulation and institutional frameworks for agricultural and rural statistics.						
Output 1.1 Effective coordination mechanisms among agricultural and rural statistics stakeholders.	1. Steering committee established.	–	✓	✓	LSB and MAF reports.	- Commitment at senior level to improving the statistics. - Willingness of agencies to coordinate statistical work.
	2. Number of steering committee meetings held per year.	0	1	1	LSB and MAF reports.	
	3. Revised village book.	–	✓	✓	LSB and MAF reports.	

SPARS element	Performance indicators	Baseline Year 2015	Target Year 2020	Target Year 2025	Data sources	Assumptions and risks
Output 1.2 Adequate number of trained staff on agricultural and rural statistics hired.	1. Organizational structure, functional statements and job descriptions for CAS and MAF statistical units.	–	✓	✓	CAS reports.	- Government commitment to fund the statistical system. - Suitably qualified personnel available to staff statistical units.
	2. Number of full-time staff in CAS.	14	20	24	MAF documents.	
	3. No. statistical staff in MAF technical units as a percent of requirements.	–	80%	100%	MAF documents.	
	4. Organizational structure, functional statements and job descriptions for local statistics units.	–	✓	✓	MAF reports.	
	4. No. of statistical staff in PAFOs as a percent of requirements.	–	80%	100%	MAF documents.	
	5. No. of statistical staff in DAFOs as a percent of requirements.	–	50%	75%	MAF documents.	
Goal 2 Developing statistical infrastructure for agricultural and rural statistics.						
Output 2.1 Adequate training programmes developed and implemented.	1. Training plans developed.	–	✓	✓	CAS documents.	- Government commitment to fund training programmes. - Willingness of educational institutions to run agricultural statistics courses. - Interest of senior staff in improving policy analysis work.
	2. No. of CAS staff with higher degree in statistics from abroad.	–	–	2	MAF documents.	
	3. No. of students completing agri. statistics course at Lao educational institutions.	–	10	60	MAF documents.	
	4. Percent of statistical staff in MAF completing training course.	–	60%	90%	MAF documents.	
	5. Percent of statistical staff in PAFOs and DAFOs completing training course.	–	25%	60%	MAF documents.	
	6. No. of policy analysis workshops completed.	–	2	5	LSB and MAF reports.	

SPARS element	Performance indicators	Baseline Year 2015	Target Year 2020	Target Year 2025	Data sources	Assumptions and risks
Output 2.2 Adequate data collection equipment and support mechanisms available.	1. Percent of district reports transmitted electronically.	–	80%	100%	CAS documents.	- Government commitment to fund ICT development. - Commitment of staff to embrace use of improved technology. - Support from senior staff in use of improved technology.
	2. Percent of provincial reports received on time.	–	90%	100%	CAS documents.	
	3. Percent of district reports received on time.	–	75%	100%	MAF documents.	
	4. ICT plan for MAF statistics prepared.	–	✓	✓	MAF documents.	
	5. ICT plan for local agricultural statistics prepared.	–	✓	✓	MAF documents.	
	6. Percent of MAF ICT statistics plan budget spent.	–	40%	80%	MAF documents.	
	7. Percent of local ICT agricultural statistics plan budget spent.	–	30%	60%	MAF documents.	
	8. Percent of DAFOs with Internet access.	–	80%	100%	MAF documents.	
Goal 3 Managing and developing agricultural and rural statistics.						
Output 3.1 Uniform standards, concepts and methods on agricultural and rural statistics developed and applied across all districts and government agencies.	1. Technical working group established.	–	✓	✓	MAF documents.	- Commitment at all levels to improving statistical methodologies.
	2. Number of technical working group meetings held per year.	0	4	4	LSB and MAF reports.	
	3. Standards manual prepared.	–	✓	✓	MAF documents.	
	4. MAF decree/decision to enforce statistical standards	–	✓	✓	MAF documents.	

SPARS element	Performance indicators	Baseline Year 2015	Target Year 2020	Target Year 2025	Data sources	Assumptions and risks
Output 3.2 Good and appropriate data collection methods adopted.						
Sub-output 3.2.1 *The required agricultural and rural indicators produced and additional indicators developed.*	1. Number of agricultural indicators published by CAS.	61	80	120	CAS website.	- Lack of government and donor funds for the required statistical collections. - Technical weaknesses of staff in using advanced statistical methodologies. - Weaknesses in data collection work. - Difficulties in ensuring objectivity in the statistics.
Sub-output 3.2.2 *Sound methodology for the estimation of value added for the agricultural sector developed and implemented.*	1. Report on improving agricultural data in national accounts.	–	✓	✓	LSB documents.	
	2. Percent of recommendations of report implemented.	–	30%	60%	CAS documents.	
Sub-output 3.2.3 *Improved administrative reporting system for agricultural and rural statistics implemented.*	1. Percent of provinces and districts trained in new administrative reporting system.	–	100%	100%	MAF documents.	
	2. System implemented.	–	✓	✓	MAF documents.	
	3. Validation survey conducted.	–	–	✓	Survey report.	
Sub-output 3.2.4 *Master sample frame for agricultural surveys established.*	1. Master sample frame established.	–	✓	✓	CAS documents.	
	2. Number of surveys conducted based on master sample frame	–	1	8	CAS website.	
Sub-output 3.2.5 *Third agricultural census conducted and results disseminated.*	1. Census conducted.	–	✓	✓	LSB, MAF documents.	
	2. Census report published and other data products disseminated.	–	–	✓	CAS website.	
	3. Census dissemination workshops held.	–	–	✓	MAF documents.	
Sub-output 3.2.6 *Regular crop condition reports prepared and disseminated.*	1. Number of crop condition reports published per year.	–	8	8	CAS website.	
	2. Crop forecasts included in monthly crop condition reports.	–	–	✓	CAS website.	

SPARS element	Performance indicators	Baseline Year 2015	Target Year 2020	Target Year 2025	Data sources	Assumptions and risks
Sub-output 3.2.7 *Improved system for crop production statistics implemented.*	1. Budget available for seasonal crop cutting surveys for rice and other crops in all provinces.	–	✓	✓	Budget documents.	
	2. Number of provinces with rice crop cutting surveys.	–	All	All	CAS reports.	
	3. Number of crop statistics reports published per year.	–	4	4	CAS website.	
	4. Calendar of crop cutting surveys for crops other than rice.	–	–	✓	CAS reports.	
	5. Annual programme of crop cutting surveys for crops other than rice implemented.	–	–	✓	CAS reports.	
Sub-output 3.2.8 *Programme of agricultural sample surveys implemented and results disseminated.*	1. Livestock/fisheries production survey results published.	–	✓ Surv. 1	✓ Surv. 2	CAS website.	
	2. Rice cost of production survey results published.	–	✓ Surv. 1	✓ Surv. 2	CAS website.	
	3. Household forestry survey results published.	–	–	✓	CAS website.	
	4. Other surveys conducted as per calendar.	–	–	✓	CAS website.	
Sub-output 3.2.9 *Statistical system for agricultural prices implemented.*	1. Number of agricultural price publications per year.	–	12	12	CAS website.	
Sub-output 3.2.10 *Improved food balance sheets published.*	1. Food balance sheets published annually.	–	✓	✓	CAS website.	

SPARS element	Performance indicators	Baseline Year 2015	Target Year 2020	Target Year 2025	Data sources	Assumptions and risks
Output 3.3 Data dissemination system developed and applied.	1. Improved Agricultural Statistics Yearbook published.	–	✓	✓	CAS reports.	- Lack of timeliness in statistical reporting might delay data release.
	2. Data release calendar and dissemination plan.	–	✓	✓	CAS website.	
	3. CAS website operational.	–	✓	✓	CAS website.	
	4. Agricultural Atlas produced	–	✓	✓	Atlas.	
	5. Percent of data releases on-time.	–	80%	100%	CAS website.	
	6. Percent of data collections documented.	–	60%	90%	CAS website.	
	7. Number of data dissemination workshops held.		Central, prov-inces	Central, prov-inces, districts	MAF documents.	
	8. Agricultural and rural statistics database.	–	–	✓	CAS website.	

ANNEX X

SPARS FINANCING PLAN

Description	2016				2017				2018			
	Millions kip			External	Millions kip			External	Millions kip			External
	Total	National	External	(US$)	Total	National	External	(US$)	Total	National	External	(US$)
1. Staff	**4,574**	**4,574**	**-**	**-**	**4,622**	**4,622**	**-**	**-**	**5,943**	**5,943**	**-**	**-**
1.1 CAS	288	288	-	-	336	336	-	-	384	384	-	-
1.2 Agricultural Statistics Units MAF departments	312	312	-	-	312	312	-	-	390	390	-	-
1.3 Statistics Units in PAFOs	778	778	-	-	778	778	-	-	907	907	-	-
1.4 Statistics Units in DAFOs	3,197	3,197	-	-	3,197	3,197	-	-	4,261	4,261	-	-
2. Staff development and training	**81**	**-**	**81**	**10,000**	**1,123**	**60**	**1,063**	**131,000**	**1,052**	**70**	**982**	**121,000**
2.1 Develop training programme	81	-	81	10,000	345	20	325	40,000	101	20	81	10,000
2.2 CAS training abroad	-	-	-	-	414	-	414	51,000	414	-	414	51,000
2.3 In-country training course	-	-	-	-	365	40	325	40,000	537	50	487	60,000
3. Data collection expenses	**797**	**270**	**527**	**65,000**	**2,662**	**500**	**2,162**	**266,500**	**8,701**	**970**	**7,731**	**952,800**
3.1 Administrative reporting system	363	120	243	30,000	393	150	243	30,000	163	100	63	7,800
3.2 Agricultural census	-	-	-	-	-	-	-	-	5,168	300	4,868	600,000
3.3 Rice crop cutting surveys	192	70	122	15,000	1,498	200	1,298	160,000	1,395	300	1,095	135,000
3.4 Livestock/fisheries production survey	-	-	-	-	375	50	325	40,000	1,580	120	1,460	180,000
3.5 Rice cost of production survey	-	-	-	-	-	-	-	-	-	-	-	-
3.6 Household forestry survey	-	-	-	-	-	-	-	-	-	-	-	-
3.7 Agricultural prices	242	80	162	20,000	396	100	296	36,500	393	150	243	30,000
4. Other SPARS development activities	**648**	**80**	**568**	**70,000**	**2,635**	**195**	**2,440**	**300,700**	**2,786**	**190**	**2,596**	**320,000**
4.1 Reorganize MAF statistics units	-	-	-	-	263	20	243	30,000	142	20	122	15,000
4.2 Develop ICT plan	-	-	-	-	375	10	365	45,000	132	10	122	15,000
4.3 Implement ICT plan	-	-	-	-	172	10	162	20,000	1,237	20	1,217	150,000
4.4 Develop additional indicators	-	-	-	-	258	15	243	30,000	177	15	162	20,000
4.5 Improve value added estimation	-	-	-	-	-	-	-	-	213	10	203	25,000
4.6 Develop agricultural master sample frame	-	-	-	-	-	-	-	-	-	-	-	-
4.7 Develop crop condition reports	-	-	-	-	309	25	284	35,000	20	20	-	-
4.8 Develop crop forecasting methods	-	-	-	-	-	-	-	-	-	-	-	-
4.9 Develop satellite methods for crop statistics	-	-	-	-	-	-	-	-	-	-	-	-
4.10 Develop dissemination plan	101	20	81	10,000	101	20	81	10,000	-	-	-	-
4.11 Redevelop Agricultural Statistics Yearbook	121	40	81	10,000	107	20	87	10,700	25	25	-	-
4.12 Develop and implement CAS website	-	-	-	-	263	20	243	30,000	182	20	162	20,000
4.12 Prepare Agricultural Atlas	426	20	406	50,000	426	20	406	50,000	-	-	-	-
4.13 Develop new data dissemination products	-	-	-	-	-	-	-	-	172	10	162	20,000
4.14 Improve food balance sheets	-	-	-	-	86	5	81	10,000	213	10	203	25,000
4.15 Workshops	-	-	-	-	273	30	243	30,000	273	30	243	30,000
5. Administration	**91**	**50**	**41**	**5,000**	**91**	**50**	**41**	**5,000**	**91**	**50**	**41**	**5,000**
TOTAL COST ex-staff	**1,617**	**400**	**1,217**	**150,000**	**6,510**	**805**	**5,705**	**703,200**	**12,629**	**1,280**	**11,349**	**1,398,800**
TOTAL COST	**6,191**	**4,974**	**1,217**	**150,000**	**11,133**	**5,427**	**5,705**	**703,200**	**18,572**	**7,223**	**11,349**	**1,398,800**

Description	2019				2020				2016-2020			
	Millions kip			External (US$)	Millions kip			External (US$)	Millions kip			External (US$)
	Total	National	External		Total	National	External		Total	National	External	
1. Staff	**7,266**	**7,266**	**-**	**-**	**8,508**	**8,508**	**-**	**-**	**30,913**	**30,913**	**-**	**-**
1.1 CAS	432	432	-	-	480	480	-	-	1,920	1,920	-	-
1.2 Agricultural Statistics Units MAF departments	468	468	-	-	468	468	-	-	1,950	1,950	-	-
1.3 Statistics Units in PAFOs	1,037	1,037	-	-	1,166	1,166	-	-	4,666	4,666	-	-
1.4 Statistics Units in DAFOs	5,329	5,329	-	-	6,394	6,394	-	-	22,378	22,378	-	-
2. Staff development and training	**1,183**	**80**	**1,103**	**136,000**	**1,203**	**100**	**1,103**	**136,000**	**4,643**	**310**	**4,333**	**534,000**
2.1 Develop training programme	101	20	81	10,000	101	20	81	10,000	729	80	649	80,000
2.2 CAS training abroad	414	-	414	51,000	414	-	414	51,000	1,655	-	1,655	204,000
2.3 In-country training course	669	60	609	75,000	689	80	609	75,000	2,258	230	2,028	250,000
3. Data collection expenses	**15,621**	**3,410**	**12,211**	**1,505,000**	**6,003**	**1,500**	**4,503**	**555,000**	**33,784**	**6,650**	**27,134**	**3,344,300**
3.1 Administrative reporting system	222	100	122	15,000	221	140	81	10,000	1,363	610	753	92,800
3.2 Agricultural census	13,248	2,700	10,548	1,300,000	2,123	500	1,623	200,000	20,538	3,500	17,038	2,100,000
3.3 Rice crop cutting surveys	1,414	400	1,014	125,000	1,433	500	933	115,000	5,932	1,470	4,462	550,000
3.4 Livestock/fisheries production survey	-	-	-	-	-	-	-	-	1,955	170	1,785	220,000
3.5 Rice cost of production survey	335	10	325	40,000	1,560	100	1,460	180,000	1,895	110	1,785	220,000
3.6 Household forestry survey	-	-	-	-	253	10	243	30,000	253	10	243	30,000
3.7 Agricultural prices	403	200	203	25,000	412	250	162	20,000	1,847	780	1,067	131,500
4. Other SPARS development activities	**2,517**	**205**	**2,312**	**285,000**	**3,682**	**315**	**3,367**	**415,000**	**12,268**	**985**	**11,283**	**1,390,700**
4.1 Reorganize MAF statistics units	-	-	-	-	-	-	-	-	405	40	365	45,000
4.2 Develop ICT plan	-	-	-	-	-	-	-	-	507	20	487	60,000
4.3 Implement ICT plan	1,257	40	1,217	150,000	1,277	60	1,217	150,000	3,943	130	3,813	470,000
4.4 Develop additional indicators	-	-	-	-	-	-	-	-	436	30	406	50,000
4.5 Improve value added estimation	213	10	203	25,000	213	10	203	25,000	639	30	609	75,000
4.6 Develop agricultural master sample frame	-		-		253	10	243	30,000	253	10	243	30,000
4.7 Develop crop condition reports	20	20	-	-	20	20	-	-	369	85	284	35,000
4.8 Develop crop forecasting methods	426	20	406	50,000	486	40	446	55,000	912	60	852	105,000
4.9 Develop satellite methods for crop statistics	-	-	-	-	851	40	811	100,000	851	40	811	100,000
4.10 Develop dissemination plan	-	-	-	-	-	-	-	-	202	40	162	20,000
4.11 Redevelop Agricultural Statistics Yearbook	25	25	-	-	25	25	-	-	303	135	168	20,700
4.12 Develop and implement CAS website	111	30	81	10,000	81	40	41	5,000	637	110	527	65,000
4.12 Prepare Agricultural Atlas	-	-	-	-	-	-	-	-	851	40	811	100,000
4.13 Develop new data dissemination products	172	10	162	20,000	172	10	162	20,000	517	30	487	60,000
4.14 Improve food balance sheets	10	10	-	-	10	10	-	-	319	35	284	35,000
4.15 Workshops	283	40	243	30,000	293	50	243	30,000	1,124	150	974	120,000
5. Administration	**91**	**50**	**41**	**5,000**	**91**	**50**	**41**	**5,000**	**453**	**250**	**203**	**25,000**
TOTAL COST ex-staff	**19,412**	**3,745**	**15,667**	**1,931,000**	**10,979**	**1,965**	**9,014**	**1,111,000**	**51,148**	**8,195**	**42,953**	**5,294,000**
TOTAL COST	**26,678**	**11,011**	**15,667**	**1,931,000**	**19,487**	**10,473**	**9,014**	**1,111,000**	**82,061**	**39,108**	**42,953**	**5,294,000**

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