



**METADATA FOR
NATIONAL AGRICULTURAL STATISTICS**

MYANMAR

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List of Acronyms

ACDPS	-	Agricultural Census Data Processing System
AFSIS	-	ASEAN Food Security Information System
ASEAN	-	Association of Southeast Asian Nations
CSO	-	Central Statistical Organization
EA	-	Enumeration Area
FAO	-	Food and Agriculture Organization
GDP	-	Gross Domestic Product
GIS	-	Geographic Information System
HS	-	Harmonized Commodity Description and Coding System
IMPS	-	Integrated Microcomputer Processing System
ISIC	-	International Standard Industrial Classification
JICA	-	Japan International Cooperation Agency
KOICA	-	Korea International Cooperation Agency
LBVD	-	Livestock Breeding and Veterinary Department
MOAI	-	Ministry of Agriculture and Irrigation
NNC	-	National Nutrition Center
NPED	-	National Planning and Economic Development
PD	-	Planning Department
PDC	-	Peace and Development Council
SLRD	-	Settlement and Land Records Department
UN	-	United Nations
UNDP	-	United Nations Development Programme
UNSNA	-	United Nations System of National Accounts
WFP	-	World Food Programme

CHAPTER 1. NATIONAL SYSTEM OF AGRICULTURAL STATISTICS

1.1 Legal Framework and Statistical Advisory Bodies

The Settlement and Land Records Department (SLRD) is the sole government agency that takes the highest responsibility for collecting, compiling and disseminating agricultural statistics, particularly production statistics, such as planted area, harvested area, yield and production of crops, in Myanmar. The SLRD under the Ministry of Agriculture and Irrigation (MOAI) is taking responsibility not only for the crops statistics but also for the statistics on the land use and land management in Myanmar. In order to get the complete and reliable statistics, the SLRD maintains close relationships and collaboration with the relevant departments and ministries of the government.

The statistical activities for agriculture and non-agriculture sectors of the country are backed up by the central Statistical Authority Act of Myanmar of 1952. The Statistical Act of Myanmar applies to all statistical activities including agricultural statistical activities.

Agricultural surveys in Myanmar are being conducted by the various government departments and universities in the country. The SLRD is responsible for conducting agricultural censuses in Myanmar. Agricultural censuses are being conducted by SLRD with support from the MOAI.

The Central Statistical Organization (CSO) collects data in accordance with the 1952 Central Statistical Authority Act No. 34 and plays key role in the national system of statistical information as prescribed in Section (1), to wit:

1. Develop a comprehensive, efficient and reliable statistical system for social and economic policy, effective planning and administration;
2. Review and advise on all statistical operations of the Union Government whether these are performed for statistical, administrative or other purposes;
3. Coordinate and integrate statistics and statistical operations;
4. Establish, prescribe and maintain the highest Statistical Standards;
5. Organize and conduct social and economic censuses or surveys with reference to Burma's (Myanmar's) economic needs and requirements either on a prepared planned basis or on a short notice as may be required.

The primary function of CSO is to collect, process, organize and supply data for the use of planners, policy makers and other users in the country as well as international bodies.

The compilation of national accounts data in Myanmar was initiated in fiscal year (FY) 1951-52 through the Ministry of National Planning and Economic Development (NPED) which computed, compiled and published the national accounts data.

During FY 1951-52 to FY 1962-63 sectoral net output values were computed based on gross output and intermediate consumption data. Since FY 1963-64, the Planning Department (PD) under the Ministry of NPED made improvements in the methodology and presentation on national account data. Now a day, efforts are also made to modify Myanmar system of national account in conformity with the criteria specified in the United Nations System of National Accounts (UNSNA) as much as possible.

1.2 Structure and Organization of the Major Agricultural Statistical Agencies

The Settlement and Land Records Department (SLRD) under the Ministry of Agriculture and Irrigation (MOAI), collects and compiles various crop production and land utilization statistics by using field surveys and monitoring system. In addition, SLRD collects, processes and disseminates the agriculture-related information b conducting agricultural censuses.

The Central Statistical Organization (CSO) under the Ministry of National Planning and Economic Development is the sole national statistics organization of Myanmar. The CSO compiles various data from both public and private sectors. CSO obtains those data as administrative records of the concerned departments. Some of the data and information compiled in the CSO are obtained from sample surveys. CSO collaborates with the SLRD for the agricultural production and land use statistics and also makes bilateral relationships with other agencies, such as Livestock Breeding and Veterinary Department (LBVD), Fishery Department and Forest Department. In addition, CSO conducts the Household Income and Expenditure surveys by ad hoc basis.

The major role of the Livestock Breeding and Veterinary Department (LBVD) is to collect, compile and disseminate the livestock production statistics of Myanmar. The LBVD is also responsible for animal health and livestock development activities of Myanmar. LBVD conducts field surveys for the collection of livestock production statistics.

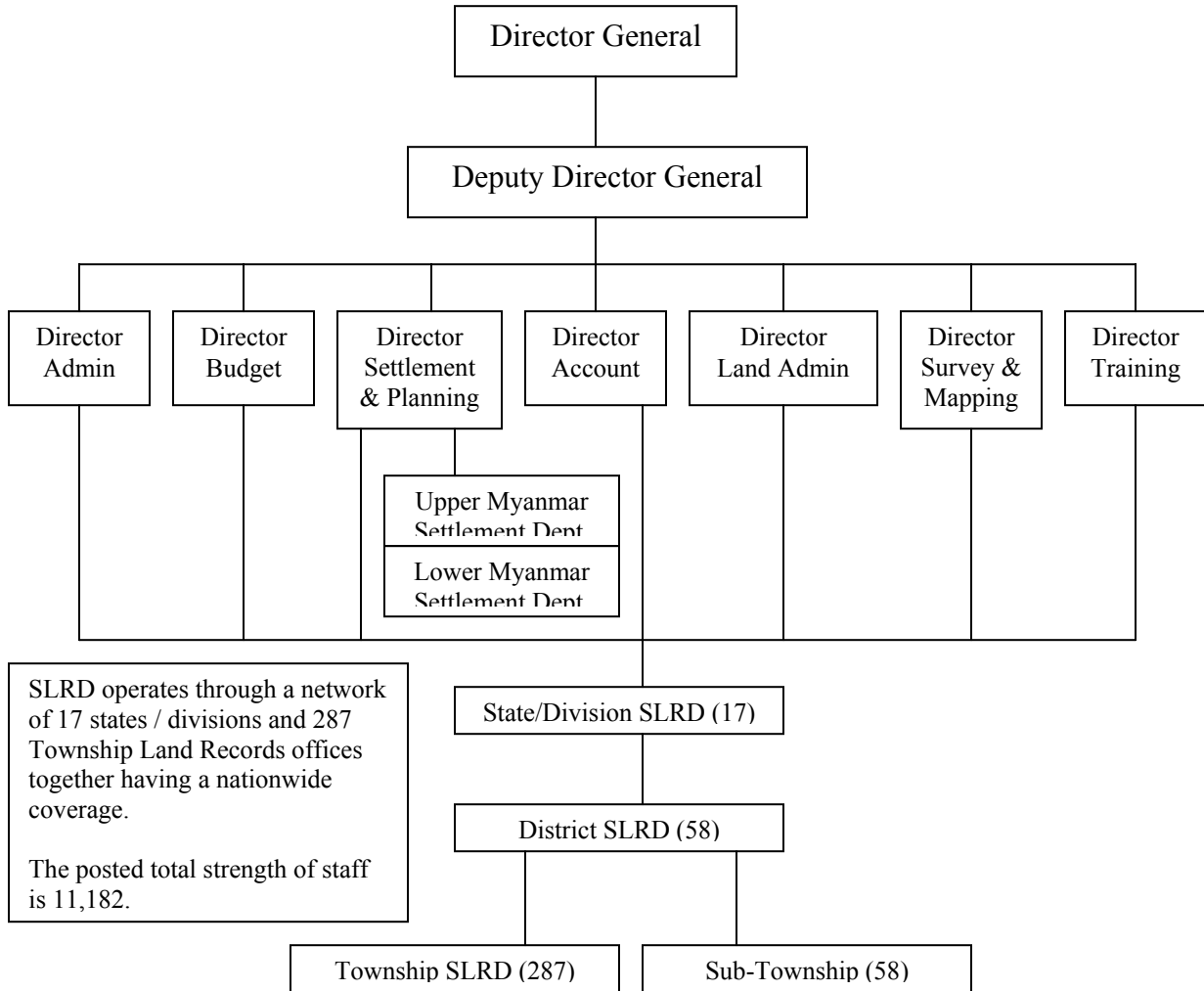
The Planning Department under the Ministry of National Planning and Economic Development is responsible for the measurement of growth of the national economy including that of the agriculture sector. Production statistics for all economic sectors are compiled from the administrative records of concerned departments and ministries while price data for various commodities are collected and compiled from the sample surveys.

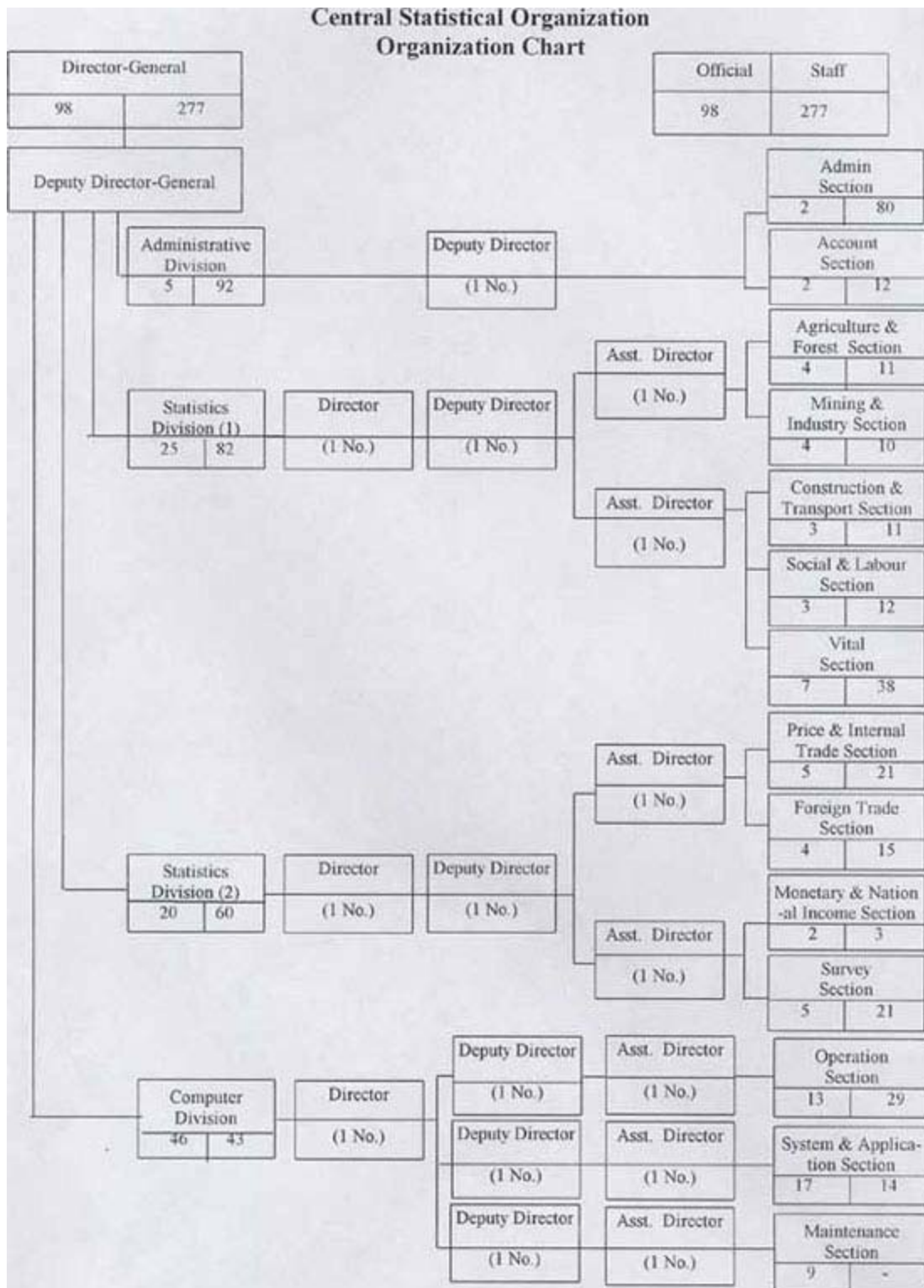
The National Nutrition Center under the Ministry of Health is responsible for the estimation and dissemination of nutrition statistics which are obtained from the fields

surveys. The National Nutrition Center has a link with CSO and MOAI for data dissemination.

Organizational Structure

Settlement and Land Records Department





Human resources (For Agricultural Statistics Activities)

Institutions	Professional Staff		Support Staff		Remarks
	HQ	Local Offices	HQ	Local Offices	
SLRD	74	370	449	12983	Permanent
CSO	5	-	5	-	Permanent
LBVD	22	126	-	1352	Permanent
PD	5	N/A	5	N/A	Permanent
NNC	2	-	6	14	Permanent

Budgets

Institution	Annual Budget Allocated (Kyat in Million)	Source of funding
SLRD	5075.46	Government
CSO	N/A	Government
LBVD	N/A	Government
PD	N/A	Government
NNC	N/A	Govt., WHO, UNICEF

1.3 Outputs and Dissemination of Agricultural Statistics

Contact Information of Focal Point of Dissemination

- (a) **U WIN KYI**, Director General, Settlement and Land Records Department, Ministry of Agriculture and Irrigation, Building No. 15, Nay Pyi Taw, Union of Myanmar.

E-mail : slrd@slrd-moai.gov.mm

Phone No. 95-67-410006, 95-67-410360

Fax No. 95-67-410136, 95-1-652195

- (b) **U SHU KYEIN**, Director General, Central Statistical Organization, Ministry of National Planning and Economic Development, Building No. 32, Nay Pyi Taw, Union of Myanmar.

E-mail : : csostat@mptmail.net.mm

Phone No. 95-67-407261, 95-67-406328

- (c) **U Maung Maung Nyunt**, Director General, Livestock Breeding and Veterinary Department, Veterinary Compound, Insein, Yangon, Union of Myanmar.

E-mail : lbvd@mptmail.net.mm

Phone No. 95-1-642253

(d) **U OHN KYAW**, Director General, Planning Department, Ministry of National Planning and Economic Development, Building No. 1, Nay Pyi Taw, Union of Myanmar.
E-mail : pd@mptmail.net.mm
Phone No. 95-67-407085

(e) **Dr. Myint Myint Zin**, National Nutrition Center, Ministry of Health, Building No-4, Nay Pyi Taw, Union of Myanmar.
E-mail :
Phone No. 95-67-411392

List of Major Statistical Reports and Publications

Title of Publication	Domains/ Contents	Medium	Format	Periodicity/ Frequency	Release Calendar
Statistical Yearbooks			Hard copy /CD	Up to 2003/ Annual	
Selected Monthly Economic Indicators			Hard copy	Bi-Monthly	
Statistical Abstract			Hard copy	Biennial	
Vital Statistics Report			Hard copy	Annual	
Bulletin of Exports			Hard copy	Annual	
Bulletin of Imports			Hard copy	Annual	
Vital Statistical Report			Hard copy	Annual	
Statistical Profile of Children and Women			Hard copy	Biennial	
Agricultural Statistics			Hard copy	1988-03/ Biennial	
Myanmar Agriculture in Brief			Hard copy	Up to 2006/ Annual	
Review on the Economic, Social and Financial Condition of Myanmar			Hard copy	Biennial	

Some statistics can be downloaded from the website of related ministries and departments. Detailed statistics are disseminated in hard copies. Those publications are usually distributed through the bookstores and announcement of publications and the prices were announced through the daily newspapers and various journals. CSO has long been disseminating economic and social data by printing text and tables in book form. Electronic versions are being done to reach those who have access to computers. The Statistical Year Book of Myanmar 2004, with socioeconomic time series data, covering the decade 1993-94 to 2003-2004. CD-ROM versions IBM or IBM compatible computers of this book are now available to the public.

CSO compiles agricultural data according to the United Nations' International Standard Industrial Classification (ISIC). CSO has been compiling various data related to food and agriculture for many years. Food and agriculture involves a series complex relationship among physical, climatic, biological, environmental, economic and social processes. Data received from various sources. Major sources include departments like SLRD, Agricultural Planning, Agriculture Service under MOAI. Other sources include Ministries as Forestry, Fishery, Cooperatives, Home Affairs, Defense and Transport.

1.4 Dialogue with Data Users and Cooperation with International Organizations

There is no official forum or Statistics Society for dialogue with the data users and agricultural statistics producers in Myanmar. However, Myanmar maintains coordination with international and regional organizations for the promotion of agricultural statistics system and data sharing among the ASEAN countries. Myanmar has been actively participating in Regional Data Exchange System Project and ASEAN Food Security Information System (AFSIS) project, both are funded by the government of Japan for ASEAN countries. Similarly, Myanmar has good relationship with Food and Agriculture Organization (FAO) of the United Nations, World Food Programme, Japan International Cooperation Agency (JICA), United Nations Development Programme (UNDP).

1.5 Strategic Framework

The SLRD is exerting its utmost efforts for modernizing the system of data collecting, compiling and disseminating agricultural statistics, particularly for crops and land use.

Currently, the Government of Myanmar is undertaking development of information and communication technology and is introducing it to all public and private sectors. Promotion of agricultural statistics system and methodology for updating information is also playing a vital role in this government's strategy.

In order to achieve these activities, national and agricultural statistics organizations are facing challenges, such as limited human resources, financial and material requirements, and weakness in experiences. Therefore, the agricultural statistics institutions of Myanmar urgently need technical and financial assistances from international organizations, such as UN, JICA and KOICA. In addition, since development of human resources is also considered as an important factor for sustainable development of agricultural statistics system, trainings for the staffs of national and agricultural statistics institutions are needed.

On the other hand, as mentioned above, SLRD is responsible for conducting agricultural censuses in Myanmar. In this regard, SLRD urgently needs to introduce the modern methodologies for processing census results and also requires experts in statistical methods.

The SLRD has the duty to prepare cadastral maps, which are being applied in registering and collecting land use situations of individual land holdings. For updating land use maps, for updating those cadastral maps, SLRD has used traditional manual methods. Recently, SLRD is trying to substitute modern digital mapping system in traditional manual maps. It is because digital maps are essential in applying GIS and Remote Sensing technology which have higher efficiency in estimating crop production, yield and harvested area and updating cadastral maps as well. Therefore, the needs for remote sensing images, training for GIS and Remote Sensing Application, and availability of related equipment are becoming major issues and challenges of SLRD. It is believed that more reliable and timely statistics will be realized if Myanmar receives more technical cooperation from international organizations.

CHAPTER 2. MAJOR DOMAINS AND SELECTED INDICATORS OF AGRICULTURAL STATISTICS

2.1 List of Major Domains and Selected Statistics and Indicators

Domain	Statistics/ Indicators
<p>PRODUCTION</p> <ul style="list-style-type: none"> ▪ Crops ▪ Livestock and Poultry ▪ Fishery ▪ Microeconomic indicators 	<p>Volume of crop production Value of crop production</p> <p>Volume of livestock and poultry Value of livestock and poultry</p> <p>Volume of fishery production & aquaculture Volume of fish production by major species Value of fishery production & aquaculture Value of fish production by major species</p> <p>Gross Domestic Product</p>
TRADE	<p>Total Value of Exports and Imports Volume of agricultural exports and imports Value of agricultural exports and imports</p>
PRICES	<p>Average monthly prices of selected agricultural commodities Wholesale Price of selected commodities Consumer Price Index by commodity group</p>
AGRICULTURAL MACHINERY	
FERTILIZER	<p>Production Import and Export Use of fertilizers by crops</p>

Domain	Statistics/ Indicators
PESTICIDES	
LAND USE	Total farm area Irrigated area Area planted/harvested of crops Arable land Fallow land Land area for permanent crops Area of non-agricultural land Area of land by type Double, Multiple and Mixed Crops area Area of crops by kind Squatter area
LABOR AND EMPLOYMENT	Rural population (estimated) Labor force in agriculture Active population in agriculture Employment in agriculture
OTHERS	Income and Expenditures by households Agricultural credit

2.2 Metadata for Each of the Major Domains

Usually, Bangladesh Bureau of Statistics follows the concepts and definitions of UN standard, in particular, the FAO guidelines for agricultural statistics.

2.2.1 Production

2.2.1.1 Concepts, Definitions and Classifications

CROPS, LIVESTOCK & POULTRY, FISHERY

Volume of Production for crops is measured by baskets and Viss in domestic publications.

Volume of production of livestock, poultry, and fish is measured by Viss or ton or metric tons.

Value of production by commodity is usually expressed in local currency (kyats).

MACROECONOMIC INDICATORS

Gross Domestic Product is measured by local currency based on current prices and constant prices.

2.2.1.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
CROPS				
Volume of crop production	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD
Value of crop production	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD
LIVESTOCK AND POULTRY				
Volume of livestock and poultry	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD
Value of livestock and poultry	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD
FISHERIES				
Volume of fishery production and aquaculture	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD
Value of fishery production and aquaculture	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD
MACROECONOMIC INDICATORS				
Gross Domestic Product	national and sub-national levels		Sample Surveys/ Administrative Records	SLRD

2.2.2 Trade

2.2.2.1 Concepts, Definitions and Classifications

Imports are shown by commodity and country of origin and consignment.

Exports are stated by commodity and country of destination.

Commodities are classified according to the “Myanmar Tariff and statistical Nomenclature and classification 1996” which is based on the internationally accepted Harmonized Commodity Description and Coding System (HS).

2.2.2.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agencies
Total value of exports and imports	International (by country of origin and destination)		Administrative Records	<i>(not mentioned in the report)</i>
Volume of agricultural exports and imports	International (by country of origin and destination)		Administrative Records	<i>(not mentioned in the report)</i>
Volume of agricultural exports and imports	International (by country of origin and destination)		Administrative Records	<i>(not mentioned in the report)</i>

2.2.3 Prices

2.2.3.1 Concepts, Definitions and Classifications

Average monthly prices of selected agricultural products are shown in local currency.

Consumer Price Indices and wholesale price indices are computed with the reference year of 1985, 1997 and 2000.

2.2.3.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Average monthly prices of selected agricultural commodities	national and sub-national levels		Sample Surveys	SLRD
Consumer price index by commodity group	national and sub-national levels			SLRD
Wholesale prices of selected commodities	national and sub-national levels		Sample Surveys	SLRD

2.2.4 Agricultural Machinery

2.2.4.1 Concepts, Definitions and Classifications

Agricultural Machineries are expressed in Number. Those agricultural machineries data are collected by the Agricultural Mechanization Department under the Ministry of Agriculture and Irrigation. SLRD compiles those data as administrative records.

2.2.4.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Agricultural machinery			Administrative records	Agricultural Mechanization Department/MAI

2.2.5 Fertilizer

2.2.5.1 Concepts, Definitions and Classifications

All data are expressed in metric ton. Fertilizer data consist of utilization of fertilizer by crops, distribution of fertilizers, domestic production and imports.

2.2.5.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Fertilizer Production			Sample Surveys/ Administrative Records	SLRD
Fertilizer Imports and Exports			Sample Surveys/ Administrative Records	SLRD
Use of Fertilizers by crops			Sample Surveys/ Administrative Records	SLRD

2.2.6 Pesticides

2.2.6.1 Concepts, Definitions and Classifications

Pesticides, insecticides and herbicides are expressed in kilograms and liters for usage and distribution.

2.2.6.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Pesticide			Sample Surveys/ Administrative Records	SLRD

2.2.7 Land Use

2.2.7.1 Concepts, Definitions and Classifications

Land use: all land use statistics are presented in Acre. Land use data consist of net area sown, area of fallow land, permanent crops land, other areas under the non-agricultural purposes. In addition, irrigated areas and flood-protected area are also described as land use statistics.

2.2.7.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Total Farm Area			Sample Surveys/Administrative Records	
Irrigated Area			Sample Surveys/Administrative Records	
Area planted/Harvested of crops			Sample Surveys/Administrative Records	
Arable land			Sample Surveys/Administrative Records	
Fallow land			Sample Surveys/Administrative Records	
Land area for permanent crops			Sample Surveys/Administrative Records	
Area of Non-agricultural land			Sample Surveys/Administrative Records	
Area of land by type			Sample Surveys/Administrative Records	
Double, Multiple and Mixed Crops Area			Sample Surveys/Administrative Records	
Area of crops by kind			Sample Surveys/Administrative Records	
Squatter Area			Sample Surveys/Adm. Records	

2.2.8 Labor and Employment

2.2.8.1 Concepts, Definitions and Classifications

Rural population and Active population in agriculture data are estimated by the Immigration and Man Power Department based on the population census conducted in 1983 and various surveys.

Labor force in agriculture is estimated by the Department of Labor based on various surveys.

Employment in agriculture is estimated by the Department of Labor based on the registration of labor.

2.2.8.1 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Rural Population			Sample Surveys	Immigration and Man Power Department
Labor Force in Agriculture			Sample Surveys	Department of Labor
Active Population in Agriculture			Sample Surveys	Immigration and Man Power Department
Employment in Agriculture			Sample Surveys	Department of Labor

2.2.9 Others

2.2.9.1 Concepts, Definitions and Classifications

Expenditures of households on food and non-food items are generated by the survey which is conducted on a regular basis every four years covering both urban and rural areas. The survey also provides the information on the changing size of urban and rural households.

Agricultural credit data are shown in total disbursed amount of credit to farmers for each their agricultural activities which is prepared by the Myanmar Agricultural Development Bank under the Ministry of Agriculture and Irrigation.

Concerning with the System of National Account, Myanmar still uses the SNA 1968. Myanmar has not yet introduced the SNA 1993 due to several reasons.

2.2.9.2 Coverage, Availability, Data Sources and Responsible Agencies

Statistics/ Indicators	Coverage	Availability	Data Source	Responsible Agency
Income and Expenditures by Households			Sample Surveys	
Agricultural Credit			Sample Surveys	Myanmar Agricultural Development Bank/MAI

CHAPTER 3. MAJOR DATA SOURCES FOR AGRICULTURAL STATISTICS

3.1 List of Major Agricultural Censuses and Surveys

Censuses

1. Agricultural Census
2. Aquaculture Census
3. Population Census

Surveys

1. Crop, Crop Area, Crop Yield, Crop Forecast Survey
2. Cost Survey
3. Livestock Survey
4. Fishery Survey
5. Forestry Survey
6. Land Use Survey
7. Structure Survey
8. Household Income and Expenditure Survey

Administrative Registers

1. Central Population registers
2. Statistical Farm Registers
3. Trade Statistics

3.2 Metadata for Each of the Major Censuses

3.2.1 Agricultural Census

3.2.1.1 Overview

The Census of Agriculture is a statistical operation for collecting, processing and disseminating data on the structure of agriculture, covering the whole or a significant part of the country using complete or sample enumeration. It is conducted as a decennial and on a regular basis. The Union of Myanmar has conducted the following Census of Agriculture as recommended in the World Census of Agriculture Programme.

- (a) Myanmar Census of Agriculture conducted in 1953 together with Population Census
- (b) Myanmar Census of Agriculture conducted in 1993 by SLRD
- (c) Myanmar Census of Agriculture conducted in 2003 by SLRD

The 2003 Myanmar Census of Agriculture included fishing activities and households engaged in aquaculture. This was the first time that fishing activities and aquaculture holdings were included in the Census following the recommendations of FAO in the 2000 programme.

3.2.1.2 Census Design

Sampling Design / Statistical Unit / Selection Procedure:

The first Myanmar Census of Agriculture was conducted in 1953 covering 252 towns and 2143 village tracts in the neighborhood of those 252 urban areas using complete count basis. It was conducted together with the Population Census. If a member of a household was engaged in agriculture, information on agriculture was collected from that person using agriculture sector questionnaire, the Population Census.

The second Myanmar Census of Agriculture was conducted in 1993. Financial and technical assistance was provided by UNDP/FAO through the project “MYA/85/004-Agricultural Census and Strengthening of the System of Agricultural Statistics”. The SLRD was the executing agency. The 1993 Census covered 272 townships out of a total of 319 in the 7 States and 7 Divisions of Myanmar. The Census was conducted on a sample basis.

The third Myanmar Census of Agriculture was conducted in 2003 and included fishing activities and aquaculture practices of household members of the Agricultural holdings in both on farm and off farm. FAO provided technical assistance through the project TCP/MYA/2801. Myanmar Census of Agriculture covered 283 townships out of 324 in 9 States and 8 Divisions. The Census was conducted on a complete count basis.

The preparation for the next Myanmar Census of Agriculture 2013 will be started early or possibly after the release of the final report of 2003 Myanmar Census of Agriculture.

The 1993 Myanmar Census of Agriculture was like a sample survey. About 250,000 agricultural holdings were selected from the 3,105,304 agricultural holdings listed in 1993. The overall sample size was about 18,000 holdings for each State/Division and about 900 holdings for each township.

The sample design used in 1993 was stratified two stage sampling. The first-stage unit was an enumeration area (EA) in a stratum belonging to a township, and the second-stage unit was a holding in the EA selected at the first-stage. At the first-stage, samples of EA were drawn from each stratum with probability proportional to size and at the second-stage, sample of holdings were selected by means of systematic random sampling from those EA's selected at the first-stage.

The list of 5992 enumeration areas (EA's) of the rural credit survey of 1987 which was drawn from 1,70,209 rural EA's of the Economic Census of 1986, was used as the sampling frame.

Main Data Items and Variables for Operational Purposes:

Number of livestock (not age and sex), land use by land type, irrigation and other inputs, annual and permanent crops, agricultural machinery, agricultural tools and implements, farm employment and holder's education, household details (members of household, age and sex) and Agricultural labour force.

Geographical Scope: 283 townships out of 324 in the 9 States and 8 Divisions

Reference Period: 2002-2003 agriculture year; from April 1, 2002 to March 31, 2003

Date of Data Collection: October 1, 2003 and completed nationwide on November 15, 2003

3.2.1.3 Conduct, Operations, Data Quality Control

The main data items in 1993 Myanmar Census of Agriculture were number of livestock (not age and sex), land use by land type, irrigation and other inputs, annual and permanent crops, agricultural machinery, agricultural tools and implements, farm employment and holder's education, household details (members of household, age and sex) and agricultural labour force.

The actual enumeration period was from 22 February to 11 April, 1993. The 1993 Myanmar Census of Agriculture also accounted for 562 special land holdings (non-household based) and 31 special livestock holdings (non-household based). The concepts and definitions used in 1993 were the same as FAO's recommendations mentioned in 1990s World Census of Agriculture Programme. The reference year for 1993 Myanmar Census of Agriculture was the 1992-1993 agricultural season. It corresponded to the 12 months from 1st April 1992 to 31st March 1993.

The 2003 Myanmar Census of Agriculture was a complete enumeration with the exception of urbanized area with small area of crops and areas with the security problems. It covered 283 townships out of 324 in the 9 States and 8 Divisions. About 3.72 million holdings were listed in 2003.

The Census enumeration period started on October 1, 2003 and completed nationwide on November 15, 2003. The reference period was 2002-2003 agriculture year; from April 1, 2002 to March 31, 2003.

The information about the holdings covered the recommended items under FAO's programme of the World Census of Agriculture like number of agricultural holdings, land use, crop area sown, farm machinery and implement, irrigation, etc., and commercial livestock, fishing activities and aquaculture information. The following questionnaires were included:

- i. Form 2003 MAC-1-Listing of Households
- ii. Form 2003 MAC-2- Agricultural Holding Questionnaire
- iii. Form 2003 MAC-3- Commercial Livestock and Poultry Questionnaire.
- iv. Form 2003 MAC-4- Household Fishing Questionnaire
- v. Form 2003 MAC-5- Aquaculture Questionnaire

A pre-test as part of the preparatory activities in undertaking the Myanmar Census of Agriculture 2003 was conducted using the Agricultural Holdings questionnaire prepared by the SLRD's core staff in four townships, Thanlyin, Khayin and Hlegu in lower Myanmar and Patheingyi Township in Upper Myanmar. Table outputs were produced using IMPS software. Based on those results and with assistance from FAO under the project TCP/MYA/2801, "Data users-producers Consultative Workshop" was organized. And then, a pilot census was conducted in four different ecological zones, Kalaw for the hilly region, Pyay for the Central, Maubin for the delta region and Myeik for the coastal region. The questionnaires used in Myanmar Census of Agriculture 2003 were finalized with the assistance of international consultants and local consultants.

A National Census Steering Committee was formed involving international experts, high level personnel from related Departments under the concerned Ministries to oversee all activities of the Census. This National Census Steering Committee was chaired by SLRD Director General. Also, a Technical Committee was created by the National Project Director.

- For Field Operation and Data Processing, various training courses for different levels of SLRD staff and other staff from the related Departments by SLRD officials and international experts conducted the training on concepts and definitions and interpretation of terms used in the census. Concepts and definitions used in the 2003 Myanmar Census were almost the same as mentioned in the 2000 World Census of agriculture programme.
- The data processing of the 2003 Myanmar Census of Myanmar was a very large and complex undertaking. In anticipation of the volume of questionnaires to be processed because of the complete coverage of all holdings in the country, five processing centers that are strategically located were set up. Each center was equipped with electronic computers and computer operators to encode the data. The data processing centers were in the following locations: Lashio of Shan State North; Taungyi of Shan State South to serve Shan State South and Shan State East; Mandalay Division Office to serve Mandalay, Magway and Sagaing

Divisions; Yangon Division Office to serve Yangon and Tanintharyi Divisions and Rakhine State; and Agriculture Census Office to serve Bago East, Bago West, and Ayeyarwady Divisions, and Mon and Kayin State. Later, because of the far distance, Tachileik District Office of Shan State East took responsibility for the encoding of the district's census questionnaires.

To provide overall control in the processing of census returns, the Agricultural Census Data Processing System (ACDDPS) was designed according to the questionnaire design and tabulation plans of Agricultural Census.

- After receiving questionnaires from the townships at the respective data processing center, before data entry, manual editing (Office editing) was done by the SLRD's core staff. Quality controls for data processing were done by interactive checking and using computer editing programs.
- The 2003 Myanmar Census of Agriculture advance results base on a 20% village tracts census returns had been disseminated. The Final Report on 2003 Myanmar Census of Agriculture will be come out at the end of December 2006.
- For food and agriculture statistics, three ministries, namely the Ministry of Agriculture and Irrigation, Ministry of Forestry and Ministry of Livestock and Fisheries, are involved. Under the Ministry of Agriculture and Irrigation, Settlement and Land Records Department takes responsibility for collection and compilation of crop production statistics and land utilization statistics. Each ministry has a planning and statistics division. The Central Statistical Organization, under the Ministry of National Planning and Economic Development, disseminates the statistics collected by all ministries through various publications. Yearly production data for livestock and fisheries is done by the departments under the Ministry of Livestock and Fisheries. Other government agencies, such as the Ministry of Planning and Economic Development use those collected statistics for economic survey. For summarizing the country's statistics the Central Statistical Organization compiles and publishes the data in the Statistical Yearbooks and the Monthly Economic Indicators, and is also performing economic surveys, such as household expenditure surveys and commodity price surveys.
- Under the Ministry of Agriculture and Irrigation, Settlement and Land Records Department (SLRD) is the sole government agency where prominent activity is the collection and dissemination of land utilization and crop statistics. The SLRD's statistical activities include (i) monitoring the progress of land preparation and cropping, condition of weather and crops, (ii) making crop forecasts, (iii) carrying out periodic crop surveys, (iv) compiling data on farmers and farm size distribution, (v) taking annual

inventory of agricultural machinery and implements, and (vi) compiling the annual season and crop report. This report provides statistics on rainfall, land use, irrigation and flood protection, crop acreage, yield per acre and production, multiple cropping, inventory of agricultural machinery and implements.

Agricultural statistics are collected through the network of 14 States/ Divisions and 286 township land records offices. Data are collected based on the cadastrally surveyed and recorded map sheets. For the estimation of the yield of major crops, crop cutting is done seasonally by the field officials by using objectives methods. Therefore most of the Agricultural Statistics available in Myanmar are crop production statistics such as quantities of crop production, sown and harvested area, yields and quantities of live stock productions. Compilation data are checked and reviewed by supervisor by using administration records. The field personnel have to be strictly followed by the instructions issued by the head office.

3.2.2 Population Census

3.2.2.1 Overview

Population Censuses were conducted by the Department of Population under the Ministry of Immigration and population. The latest population census was conducted in 1983 by the Department of Population. At that time, the questionnaires used for population Census did not include any questions on agriculture. But the 1953 population Census included some additional questions on Agriculture. When a member of the household is engaged in agriculture, he/she had to answer the questions on agriculture.

3.3 Metadata for Each of the Major Surveys

3.3.1 Crops, Crop Area, Crop Yield and Crop Forecast Survey

3.3.1.1 Overview

Information on Crop, Crop area, Crop yield and Crop forecast are done by the Settlement and Land Records Department under the Ministry of Agriculture and Irrigation. Data are collected seasonally by field surveys using cadastral maps and related registers.

3.3.2 Cost of Cultivation Survey

3.3.2.1 Overview

In 1989, the Cost of Cultivation Survey was conducted by Central Statistical Organization (CSO) under the Ministry of National Planning and Economic Development.

3.3.3 Livestock Population Survey

3.3.3.1 Overview

Livestock Population Survey was carried out annually on a regular basis by the livestock breeding and Veterinary Department under the Ministry of Fisheries and Livestock Breeding and Veterinary.

3.3.4 Land Use Survey

3.3.4.1 Overview

Land use statistics are compiled by field survey which is done by SLRD based on the cadastral maps and related registers.

3.3.5 Household Living Conditions Assessment Survey

3.3.5.1 Overview

In 2003, an Integrated Household living conditions Assessment Survey was jointly conducted by Planning Department and Central Statistical Organization on a Adhoc basis.

3.3.6 Household Food Security Survey

3.3.6.1 Overview

During the period 1997-1999 the National Nutritional Center under the Ministry of Health conducted this survey. This is being conducted on an adhoc basis.

3.3.7 Household Income and Expenditures Survey

3.3.7.1 Overview

Household Income and Expenditure Survey was conducted in 1997 by the Central Statistical Organization.

3.4 Metadata for Each of the Administrative Registers

3.4.1 Central Population Registers

3.4.1.1 Overview

The concerned department for this register is the Department of Population under the Ministry of Immigration and population.

3.4.2 Statistical Farm Registers

3.4.2.1 Overview

Crops and Land use Statistics are available from the Settlement and Land Records Department under the Ministry of Agriculture and Irrigation.

3.4.3 Other Market Information, such as Trade Statistics

3.4.3.1 Overview

Prices and average monthly prices by commodity group are compiled by the Central Statistical Organization under the Ministry of National Planning and Economic Development.