



BANGLADESH STRATEGIC PLAN ON AGRICULTURAL AND RURAL STATISTICS (2016-2030)

June 2017



**Bangladesh Bureau of Statistics (BBS)
Statistics and Informatics Division (SID)
Ministry of Planning**



Secretary
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of Bangladesh

FOREWORD

It is my pleasure to present you the Bangladesh Strategic Plan for Agricultural and Rural Statistics-SPARS that was approved by Ministry of Planning on 27-07-2017.

The Bangladesh SPARS translates the five core strategic goals with 37 output and 87 actions for improvement of agricultural and rural statistics synergized with the goals of National Strategy for the Development of Statistics-NSDS, National Agricultural Policy-NAP as well as 7th five year plans.

The SPARS was prepared with the support of FAO in line with the Global Strategy to improve Agricultural and Rural Statistics (GSARS)-a global initiative that was developed under the guidelines of United Nations Statistics Division (UNSD) and was endorsed in 2012 by United Nations Statistical Commission (UNSC). It will facilitate to build up strong basis of agriculture and rural statistics in the country to provide data for monitoring Sustainable Development Goals (SDGs).

The document is a living one for the period of 2016-2030 and will be adjusted according to the changes in relevant sector. It covers all statistics somehow aligned with agricultural and rural sectors with clear emphasis on crops, fisheries, livestock, agricultural marketing, land water resource, forest and environment statistics. The clear roadmap that has been depicted in the document will help to improve statistics related to above issues through implementation of stipulated actions. The reliable and timely data of agricultural and rural sector will contribute to the development prospects of this sector in Bangladesh.

Dhaka
June, 2017

K M Mozammel Hoq
Secretary

ACRONYMS

ACPS	Agriculture Crop Production Survey
AMIS	Agriculture Market Information System
BADC	Bangladesh Agricultural Development Corporation
BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BFD	Bangladesh Forest Department
BMD	Bangladesh Meteorological Department
BRRI	Bangladesh Rice Research Institute
BWDB	Bangladesh Water Development Board
CPI	Consumer Price Index
DAE	Department of Agricultural Extension
DAM	Department of Agricultural Marketing
DLS	Department of Livestock Services
DoF	Department of Fisheries
EC	Economic Census
EPB	Export Promotion Bureau
FAO	Food and Agriculture Organization of the United Nations
FBS	Food Balance Sheet
FPMU	Food Planning and Monitoring Unit
GDP	Gross Domestic Product
GIS	Geographical Information System
GSARS	Global Strategy to Improve Agricultural and Rural Statistics
HIES	Household Income and Expenditure Survey
ICT	Information and Communication Technology
IdCA	In depth Capacity Assessment
ISRT	Institute of Statistical Research and Training
IT	Information Technology
LFS	Labour Force Survey

LUS	Land Use Statistics
MDG	Millennium Development Goal
MoA	Ministry of Agriculture
MoD	Ministry of Defence
MoEF	Ministry of Environment and Forests
MoF	Ministry of Food
MoFL	Ministry of Fisheries and Livestock
MoLGRDC	Ministry of Local Government, Rural Development and Cooperative
MoP	Ministry of Planning
MoWR	Ministry of Water Resources
NBR	National Board of Revenue
NQAF	National Quality Assurance Framework
NSC	National Statistical Council
NSDS	National Strategy for the Development of Statistics
NSO	National Statistics Office
NSS	National Statistical System
PARIS 21	Partnership in Statistics for Development in the 21st Century
QNA	Quarterly National Accounts
SDG	Sustainable Development Goals
SID	Statistics and Informatics Division
SMI	Survey of Manufacturing Industries
SNA	System of National Accounts
SPARRSO	Space Research and Remote Sensing Organization
SPARS	Strategic Plan for Agriculture and Rural Statistics
UNSC	United Nations Statistical Commission
UNSD	United Nations Statistics Division

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Executive Summary

Preparation of Strategic Plan for Agriculture and Rural Statistics (SPARS) for Bangladesh has been done by adaptation of the process followed in developing National Strategy for Development of Statistics (NSDS). The approach provides opportunity to the users to assess the current status of Agriculture and Rural Statistics, review data needs, evaluate the degree of integration of the agricultural sector in the National Statistical System (NSS) and develop a medium and long-term sustainable perspective addressing key constraints in meeting data demands.

The Bangladesh SPARS is prepared in line with Global Strategy to improve Agricultural and Rural Statistics (GSARS). The GSARS was formulated by World Bank and FAO under the guidelines of United Nation Statistics Division (UNSD) and that endorsed by United Nations Statistical Commission (UNSC) in 2012. In line with Global Strategy, Bangladesh Bureau of Statistics (BBS) carried out the In-depth Capacity Assessment (IdCA) program with the support of FAO and published the report in 2014. The preparation of SPARS is also the continuation of fulfillment of proposal I recommended in IdCA. Countries having the national plan on improvement of national statistical system have been considered important in SDG document.

The SPARS is a living document for the country to meet its medium to long term requirement for strengthening and development of well-coordinated and integrated agriculture and rural statistics system in cooperation with relevant ministries/departments as well as international agencies. The approach adopted ensures release of coherent, reliable, internationally comparable and timely Agriculture and Rural Statistics (ARS).

The SPARS has given emphasis on development of professionalism in the statistical work through regular training, introducing higher course in statistics and close connection with Institute of Statistical Research and Training (ISRT) of University of Dhaka and Bangladesh Agriculture University. The restructuring the Agriculture Wing of BBS as well as establishing statistical cell in planning wing of all ministries and departments has also been recommended. Establishing good coordination among relevant ministries/agencies are vividly discussed in SPARS.

Considering the importance of reliable statistics for measuring SDG, National Five-Year Plan and other strategic plan, focus has been given to best use of administrative data to lessen the burden on BBS as well as to increase the use of administrative records as official statistics. Clear guidelines have been provided in SPARS to address the issue.

The Bangladesh SPARS will help in ensuring availability of core indicators identified in (GSARS). A census and survey calendar has been prepared (shown in Annexure-II) in SPARS that will give clear idea of number of census and surveys important for the country.

The SPARS also identifies the areas like best use of ICT infrastructure for statistical purposes including data collection, processing and dissemination. It emphasized on continuous evaluation of data demand, common data management system and data sharing protocols.

There are ten broad parameters of SPARS itself that is explained in introduction. These will help to understand the processes of implementation of SPARS activities. The SPARS has identified the necessity of statisticians in preparing national plans for getting technical support in assessing the progress of the plan.

Five Strategic Goals, 37 outputs and 87 strategic actions/activities have been identified in SPARS for their achievement over the period 2016 to 2030. The Strategic Goals are as follows:

Strategic Goal 1: Improve competencies of National Statistical System to produce and disseminate core set of ARS in accordance with international standards and best practices

Strategic Goal 2: Strengthen partnership and coordination among Ministries / Departments and attain harmonized definitions and statistical practices to efficiently produce coherent ARS

Strategic Goal 3: Strengthen capacity to adopt cost effective and scientific survey methodology using sampling frame based on Censuses

Strategic Goal 4: Develop a comprehensive human resources and capacity building mechanism with corresponding organizational setup to ensure participation in policy formulation

Strategic Goal 5: Improve ICT infrastructure, develop ICT applications for collection, compilation and processing of ARS and establish Integrated Data Management and dissemination system

The document has been developed following Result based Management approach. Hence, Logical Framework has been developed to identify output(s) to be achieved to meet each of the above mentioned strategic goals. Further, corresponding to each output, number of strategic actions/activities has been identified. For each activity to get completed, Objectively Verifiable Indicators (OVI) has been identified. These would be used for reporting progress of SPARS.

A Committee chaired by Secretary, Statistics and Informatics Division and co-chaired by Director General, Bangladesh Bureau of Statistics has been proposed in SPARS for monitoring and evaluation of implementation of SPARS. The committee will evaluate the progress of it and provide direction for proper implementation of SPARS.

CHAPTER I: INTRODUCTION

Bangladesh is the country with distinct agricultural setting. The substantial part of its topographically and climatically diverse economy is set in the Sundarbans Delta, the largest delta of the world. It is the most populous country in the world with 156.8 million populations (2014) with high population density of 1063 person per sq. km. Sixty six percent population lives in rural areas. Agriculture is main occupation of the working population with 45 percent being engaged in these activities. Contribution of agriculture in GDP is more than 15 percent in 2015-16. Its diverse sub-sectors comprising of crops, livestock, fisheries and forests account for 55 %, 14%, 22 % and 9% respectively in its agriculture economy.

1.1 Importance of Agriculture and Rural Sector in Bangladesh

1.1.1 There is paramount importance of agriculture and rural sector in Bangladesh to meet its diverse development challenges. The agriculture sector is the major contributor to sustained food, nutrition and livelihood security of its large population to achieve self-sufficiency in food production, reduce rural poverty and foster sustainable economic development. Development of agriculture in Bangladesh is therefore accorded high priority by the Government with special emphasis on agriculture related policies, planning and informed decision making. In this process, the need for scientific measurement of changes in agriculture related indicators is duly recognized. It has, therefore, emerged timely availability of quality data on different aspects of the food and agriculture. Meeting such data demand requires concerted and organized efforts by various organizations dealing with agriculture related issues. The advancements in technology in capturing and analysis of data have opened new frontiers to interpret, understand and infer about the issues confronting the sector. Statistical system is facing serious challenges in meeting this rising demand. There is a need to improve and strengthen the system with specific focus on agricultural and rural statistics.

1.2 Emerging Needs for Strategic Plan on Agricultural and Rural Statistics

1.2.1 Creation of enabling conditions to improve statistical system and taking sustainable measures to improve timely availability of quality statistics is at the centre stage of strategies for increasing food security, reducing poverty and promoting overall economic growth. This aspect has been re-stressed in the 7th Five Year Plan (SFYP) of Bangladesh. One of the distinct features of contemporary planning process in Bangladesh is the emphasis on building up evidence based decision making and periodic monitoring and evaluation of development. Towards this end, FYP document has made particular mention on need to improve system of relevant data in terms of quality, timeliness and adequacy.

1.2.3 This distinctive recognition of an efficient data system incidentally converges with the global context in which GSARS is evolved under the aegis of United Nations. The genesis of the GS was in the experienced prevalence of general weakness in the timely availability of quality statistics, resultant handicaps faced in decision making and universally recognized need for desired set of direct and derived statistical indicators on different aspects of sector for formulating programs and policies. The main objective of the GS is to reposition the national and international agricultural and rural statistics systems to meet the requirements of various stakeholders for monitoring of national and global development goals in synergy with the national development priorities. Bangladesh is one of the anchor countries in the Asia-Pacific

region for GS implementation. The Food and Agriculture Organization of the United Nations (FAO) has provided necessary support in this endeavour.

1.2.4 One of the important elements of GS implementation is to develop SPARS in accordance with the national priorities and development plans, shared by all stakeholders. The Bangladesh SPARS envisages strategizing its goals for realization of GS objectives synergized with the national context, and articulated in its vision and mission. It includes a concrete plan of action to implement it. SPARS process provides a means to raise the profile of agricultural and rural statistics, build a constituency for the future and ensure that main priorities are agreed and shared by stakeholders.

1.3 ARS to measure achievements for Sustainable Development Goals¹

1.3.1 Bangladesh is rigorously working on Sustainable Development Goals to achieve targets by 2030. The goals address broad range of issues. These 17 SDGs has major emphasis on sustainable development and has focus on issues like inequality, unsustainable consumption patterns, weak institutional capacity, and environmental degradation. The 2nd SDG goal articulated as “**End hunger, achieve food security and improved nutrition and promote sustainable agriculture**” directly concerns the agricultural and rural development. This goal has a series of targets to support the three interrelated components: ending hunger, achieving food security, improved nutrition and promoting sustainable agriculture. There are 21 targets in all the SDGs which have direct impact on agriculture related activities. Achieving the SDGs would be possible only if these targets are included in policy formulation, planning, budgeting, programme development and implementation. Therefore, there is a need to produce the agriculture and rural statistics relevant to SDGs keeping in view the importance of this sector in the context of Bangladesh society and economy. The SPARS provides an opportunity for developing pathway towards taking agriculture development programmes for meeting the targets in SDG and monitoring the achievements.

1.4 Broad parameters adopted in development of SPARS

1.4.1 The SPARS process is an adaptation of the process followed in developing NSDS of Bangladesh. The approach provides opportunity to the stakeholder to assess the current status of statistics, review data needs, evaluate the degree of integration of the agricultural sector in the National Statistical System (NSS) and develop a medium and long-term and sustainable perspective addressing key constraints and data demand. Systematically designed SPARS, thus, will be a living document for the country to meet its medium to long term requirement of strengthening well-coordinated and integrated agriculture and rural statistics system, co-shared by its different stakeholders for their specific data needs. The SPARS has been developed keeping the following parameters in view:

- (i) **Complementary to NSDS:** The SPARS BD is a document complementary to NSDS goals especially in the areas of agriculture statistics. All the strategic goals and activities therein have to be in consonance with implementation of NSDS.
- (ii) **Medium and Long Term Strategic Plan:** The SPARS is designed to integrate agriculture and rural statistics into national statistical system. Although this is a continuous process, the activities envisaged are expected to start immediately to achieve

¹<http://www.un.org/sustainabledevelopment/news/communications-material/>

strategic goals. The activities are to be taken in such a manner that SPARS is fully implemented by 2030.

- (iii) **Continuity:** The SPARS has to be implemented within the stipulated time frame. But this will be a living document and will be adjusted over time.
- (iv) **Reliability and Accessibility:** Main focus of the SPARS is to emphasize issues that will ensure the reliability of disseminated data and its accessibility to the users.
- (v) **Capacity Development for Sound National Statistical System:** Focus on the sound national Statistical System has been given with due importance to agricultural and rural statistics. This will characterize professionalism in statistical work, organizational reform, human resource management, efficiency, use of scientific methodology and ensuring evidence-based decision making.
- (vi) **Effective Coordination:** Specific strategies are to be built for achieving effective coordination between BBS and ARS dealing Ministries.
- (vii) **Delineation Coverage of Agricultural and Rural Statistics:** The SPARS has to critically delineate the country specific scope and coverage of agriculture and rural sector keeping connection with the guidelines of Global Strategy.
- (viii) **Supply of Core Statistics:** The SPARS has to emphasize on supply of core set of agricultural and rural indicators based on relevant census and survey data as well as administrative data. This should support the country perspective as well as five-year plan and sectoral plan and SDG monitoring.
- (ix) **Data Analysis and Policy Interpretations:** The SPARS would provide mechanism for statistical analysis of census and survey data with required policy interpretation for the policy makers.
- (x) **International Comparability:** The SPARS would ensure adoption of UN Fundamental Principles of official statistics as well as the guidelines of Global Strategy to ensure international standards and comparability.
- (xi) **Survey Calendar and Log Frame Analysis:** The SPARS would have census and survey calendar clearly indicating the core census and surveys essential for Agriculture and Rural Statistics and with their periodicity.
- (xii) **Monitoring of SPARS Implementation:** For implementation of SPARS, a committee chaired by Secretary, SID, Ministry of Planning co-chaired by Director General, BBS has been proposed to monitor the proper implementation of Strategic Actions to achieve Strategic Goals of Bangladesh SPARS.

1.5 SPARS Process in Bangladesh

1.5.1 Overall direction for preparation of SPARS was given at the highest level of Government. SPARS preparation is led by the Bangladesh Bureau of Statistics (BBS), Statistics and Informatics Division (SID), Ministry of Planning, Government of Bangladesh. The first phase of launching the implementation of GS in Bangladesh commenced in December 2013. In 2014 a comprehensive In-depth Capacity Assessment (IdCA) of its system of Agriculture and Rural Statistics (ARS) and that of its national institutions engaged in production of core ARS data was made by the BBS in close collaboration with various departments of the Government of Bangladesh dealing in subjects relating to agriculture and allied activities. This was done with technical support of FAO.

1.5.2 SPARS has been designed and developed using two tier structure. There is a high level Steering Committee headed by Secretary, SID and its members are senior officers from BBS and the line ministries dealing with agricultural and rural statistics as well as data users. This body

has all the powers to approve and implement activities relating to SPARS. This body is assisted by a Technical Working Committee headed by Director General, BBS which has members from the concerned data producing departments. Director, Agriculture Wing, of BBS is the National Coordinator for formulation of SPARS.

1.5.3 Standardized SPARS designing process gives due consideration to existing sub-sectoral institutional and administrative structure and priorities and the statutory framework of official statistics in the country. It envisages determination of in-country governance structure to oversee the integration of agriculture into the NSS, identification of country specific set of core data items, existing gaps in data availability, assessment of resources and methodologies in vogue, the institutional and statistical methodology aspects related to integrate agriculture into the NSS, application of information technology and data management requirements. Development of SPARS also ensures consistency and complementarities of future investments and resources in the system and sustainability of impact of interventions.

1.5.4 The SPARS designing process started through a consultation workshop under the Chairmanship of Secretary, Statistics and Informatics Division (SID), Ministry of Planning in collaboration with all stakeholders involved in generating ARS on **15 November, 2015**. The workshop was attended by 32 participants- 20 from BBS and SID and 12 from different departments concerned with agriculture and allied activities. The workshop deliberated on issues, approaches, practices and institutional arrangements for effective strategic planning for agriculture and rural statistics development. A meeting was held on **26 November, 2015** chaired by DG, BBS where different issues in preparing SPARS were discussed. In a meeting on **30th March, 2016**, draft SPARS document was presented to the Technical Working Committee (TWC) which constituted of 36 members from the different line departments. The draft SPARS was scrutinized in the meeting chaired by DG, BBS on **21 August, 2016** with all Directors of the different wings and Project Directors, BBS, for incorporating additional comments and further observations on the SPARS document. Later on, the document was sent to the relevant ministries/departments for comments/suggestions and was improved accordingly. This document along with the earlier document was discussed in BBS in a meeting chaired by Director General, BBS on **7 November, 2016** where all Directors of BBS, representatives of SID Ministry of Agriculture, Ministry of Fisheries and Livestock and concerned agencies participated. This document has been modified based on the suggestions made in the meeting.

1.5.5 The document on SPARS was placed before the Technical Working Committee meeting on **23 February 2017** that was chaired by Director General, BBS. Representatives from all relevant ministries/departments were present. The document was widely discussed and finalized there. The first meeting of the Steering Committee headed by Secretary, Statistics and Informatics Division was held on 4 May 2017. The final meeting of Steering Committee was held on 22 May 2017 and the SPARS was approved in that meeting. After the approval of the SPARS by the Government, the implementation of various activities under each strategic goal shall commence.

CHAPTER II: INSTITUTIONS AND POLICY CONTEXT FOR ARS

2.1 Institutional Framework of National Statistical System (NSS)

2.1.1 After the independence in 1971, the institutional strengthening and organizational structuring in statistical system was done as the Government realized the necessity of forming a strong national statistical organization. Bangladesh Bureau of Statistics was established in 1974 consolidating Bureau of Statistics under Ministry of Planning, Population Census Commission under Ministry of Home Affairs, Bureau of Agriculture Statistics and Agriculture Census Commission under Ministry of Agriculture. The Statistics Division was also formed under the Ministry of Planning in 1975 to provide policy support and guidelines. The Statistics Division was further renamed as Statistics and Informatics Division in 2013 with greater responsibilities. The NSS Bangladesh has evolved as a centralized system with Bangladesh Bureau of Statistics (BBS) is the lead and a nodal institution for generating, coordinating and disseminating official statistics on various social and economic aspects of the country.

2.1.2 BBS is the major source of key agricultural and rural statistics. It has experience in conducting four agricultural censuses since the country's independence. The Annual Survey on Crop Production is one of the priority surveys of the BBS, generating annual area and production estimates for 126 crops, which include major crops such as aus, aman, boro (three paddy crops), jute, potato and wheat. The BBS also collects price statistics and brings out price indices and other macroeconomic aggregates.

2.1.3 The NSS Bangladesh includes not only the BBS but also various Ministries and public agencies that participate in collection and dissemination of statistical data. Decentralized and distinct administrative and management responsibilities assigned to sub sectors of agriculture viz, crops, livestock, fisheries, forestry etc. has also resulted in decentralization in the statistical system.

2.1.4 Recently enacted **Statistics Act, 2013** is an institutional milestone of NSS in Bangladesh. The Act entrusts the BBS with the responsibility for collection, compilation, analysis, dissemination and coordination of all types of statistics including agricultural statistics in the country in a methodological and timely manner. The Act, in Clause Ga-6 mandated BBS to conduct Population Census, Agriculture Census, Fisheries and Livestock Census and Economic Census. It also empowers BBS to conduct all types of surveys including agriculture related and land use surveys. It may be mentioned that an approval from BBS will be required if any organization likes to conduct survey. Thus, the Act has entrusted BBS with the functions of supporting, coordinating and endorsing the statistics generated and disseminated by other line ministries, departments and organisations. This, in the long run, is expected to streamline the methodological and reporting differences of many key national statistics, enhance credibility of statistics and improve access and availability to different users and stakeholders.

2.2 Bangladesh Bureau of Statistics

2.2.1 The BBS is the National Statistical Office (NSO) authorized and mandated for collection, processing, dissemination and coordination of almost all major official statistics of national importance. The key functions of BBS are to organize and conduct national censuses & statistical sample surveys, management of human resources including their capacity development, create and organize a unified service for all statistical personnel, advise and

coordinate statistical works for all offices of the government and authenticate statistics produced by the other departments for maintaining statistical standards.

2.3 Aligned Ministries and Departments

2.3.1 Not all activities concerning agricultural statistics are carried out by the BBS and there are also some important activities, such as generation and dissemination of fisheries statistics that are organised in a decentralised manner by the Department of Fisheries (DoF) under the Ministry of Fisheries and Livestock (MoFL). On some other subjects, such as livestock and poultry, generation of statistics is not regular and well-organised. There are sporadic and less statistically structured data collection/compilation activities carried out by other agencies such as the Department of Agricultural Extension (DAE), Department of Agricultural Marketing (DAM), Ministry of Environment and Forest (MoEF), Bangladesh Agricultural Development Corporation (BADC), Bangladesh Water Development Board (BWDB) etc.

2.3.2 Outside the NSO, very little statistical activities are performed to generate data and even if they have been performed, standard operating procedures are lacking. Most noticeable statistical activities in the line departments are by Department of Fisheries and Bangladesh Forest Department. The annual fisheries statistics of Bangladesh is released since 1982 by the Department of Fisheries (DoF). Statistics on forest area cover and forest produce is generated through administrative procedures of Bangladesh Forest Department. Department of Livestock Services also uses statistics for its subsector but there is no systematic statistical operation for this purpose.

2.3.3 Ministry of Agriculture also undertakes surveys for monitoring of crops and prices of commodities albeit without proper statistical considerations. Ministry of Water Resources has the mandate of management, development and efficient use of water resources in the country. Irrigation and water statistics is compiled by the Ministry. Information is regularly available for major irrigation projects. However, there are some methodological and use of appropriate classification related issues in the data collected. No information is at present available on minor irrigation.

2.3.4 Some of these statistics do get generated out of the administrative procedures. Important among these are statistics on agricultural trade and rural credits (Bangladesh Bank), government budgetary support to agriculture sector (Ministry of Finance) and rural infrastructures such as rural electrification and communication.

2.3.5 Different departments use statistics for their respective sectoral requirements. Most prolific user of ARS for informed decision making is Food Planning and Monitoring Unit (FPMU), for its mandate to manage food security situation in the country. Besides data on availability of food and its distribution in the country, FPMU is also concerned with the early warning system on the domestic and international availability of food as well as market indicators. Planning Commission and Ministry of Finance are other important user organisations of specified ARS statistics for informed decision-making.

A list of user organizations along with source of data providing organization is at Annex-I

2.4 Coordination Mechanism in NSS

2.4.1 Prior to the Statistics Act, 2013, the highest advisory body of the BBS was the National Statistical Council to meet periodically to take broad policy decisions and consider recommendations on collection, compilation and dissemination of statistics. In the provisions of the Statistics Act, the apex decision body to approve the broad technical and policy issues of the

BBS is the Steering Committee (SC), headed by the Secretary, Statistics and Informatics Division of the Ministry of Planning. There is a Technical Committee (TC) headed by the Director General, BBS to look into technical details and operational issues. Besides these, inter-ministerial effort to synchronize statistics of greater national interest is also underway.

2.4.2 During the consultations for the NSDS it became clear that the links between the BBS and other producers were very limited and immediate improvements in coordination were needed. NSDS also considered for establishing the Statistical Cells of the BBS in the key line departments. The establishment of statistical cells is significant in data production, to promote consultation and coordination and such cells are envisaged to provide overall management and policy guidance to the ministries and to review and harmonise all statistical concepts, classifications and methods used by them in data collection, processing and dissemination. Furthermore, they will be responsible for compiling statistics from the data of the respective ministry.

2.4.3 The NSDS also provides for signing Memorandums of Understanding (MOU) between the BBS and other agencies so as to build a strong and sustainable relationship with them. Furthermore, it seeks to use, where possible, the field strength of the ministries/agencies during censuses or large scale surveys, which will help accelerate the statistical work and improve data quality at low cost.

2.5 National Strategy for the Development of Statistics-NSDS

2.5.1 Focusing on the needs of all data users, **Bangladesh Bureau of Statistics** prepared the National Strategy for the Development of Statistics (NSDS) in 2012 in consultation with a number of development partners and agencies. The NSDS document states that the **Vision** of NSS Bangladesh is to **become a world-class provider of authentic, relevant and timely data in a holistic and user-friendly manner**. It inter alia promotes better generation and dissemination of statistics and strengthens all statistical services so that they meet the needs of a rapidly developing nation, ensuring availability of comprehensive and coherent statistical data while making effective and efficient uses of national resources. The formulation of NSDS has taken note of strengths and weaknesses of the NSS and stated the **Mission** of the NSS (1) to establish an integrated, professional, efficient and effective national statistical system, under the guidance and leadership of the BBS; and (2) to produce official statistics that meet the current and evolving needs of national and international users in a transparent and timely fashion, using international standards and the best statistical practices.

Proposed NSDS priorities for the next ten years within the proposed budget and capacity:

- i. Focusing on improving the quality, coverage and use of core statistics required for national planning, economic management and for monitoring progress towards national goals.*
- ii. Strengthening the professionalism of the national statistical system, which involves: increasing the skills and expertise of the work-force and increasing the proportion of the staff with professional qualifications; providing strong professional leadership for BBS and the statistical system generally; and developing and strengthening internal procedures to make the statistical system more open and accountable and to build trust in statistical products.*
- iii. Enhancing capacity to collect, compile, disseminate and, especially, use statistics at the local level, providing statistical information to help empower the citizens of Bangladesh.*
- iv. Promoting and strengthening access to and the use of official statistics at all levels of society, based on an “open-data” strategy.*

2.5.2 The NSDS is to be implemented through the BBS with responsibility shared by its eight wings. NSDS recognizes the importance of coordination, both internally within BBS and externally with other departments. Strong coordination set up has been created in BBS through a Committee chaired by Director General to monitor implementation of activities under NSDS. Directors of the BBS and Directors from other departments are members of the committee.

2.5.3 NSDS has also laid emphasis on improvement of quality, coverage and timeliness of agriculture and related statistics using latest ICT and space technology.

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2.5.6 The NSDS also provides for signing Memorandums of Understanding (MOU) between the BBS and other agencies so as to build a strong and sustainable relationship with them. Furthermore, it seeks to use, where possible, the field strength of the ministries/agencies during censuses or large scale surveys, which will help accelerate the statistical work and improve data quality at low cost.

2.6 National Plans (Perspective & Five Year)

2.6.1 The 7th Five Year Plan (FYP), referencing 2016 – 2020² identifies the contemporary national priorities and the vision for the development of agriculture sector to ensure food and nutritional security, enhancement of sustainable intensification and diversification of climate resilient agricultural production with increased commercialization, livelihood improvement through technological innovations and use, strengthening of research and extension system, developing marketing extension, value addition of agricultural products, and linking farming community with markets, both local and global. National planning process assigns key role to subject Ministries to implement government policies and programmes and in developing and implementing projects.

2.6.2 Despite several constraints faced by the farm sector and food security concerns in the country, there has been encouraging response to the stimulus provided by the successive Plans and sub sector policies.

2.7 Sub Sector Policies

2.7.1 In addition to the National Agriculture Policy³ formulated by the Ministry of Agriculture and updated from time to time, respective policies on fisheries, livestock, as well as environment and forestry are formulated and directed by the respective Ministries. This is in consonance with

²Seventh Five Year Plan Fy2016 – Fy2020, Accelerating Growth, Empowering Citizens, General Economics Division (GED), Planning Commission, Government of the People's Republic of Bangladesh, October 2015

³National Agriculture Policy, 2013, Bangladesh (<http://www.moa.gov.bd/policy/nap.htm>)

the need to address the recent developments and the problems concerning the overall food sector, involving different ministries and departments dealing with inputs, resources, production and distribution of food commodities.

2.7.2 The National Food Policy for food management and food security connects with all these sub-sectors policies. The policies framed by different departments are synergised with the overall planning and development priorities of the government. The National Food Policy envisages wider statistical input for addressing food management and food security. Statistics not only relating to crop production and the inputs and resources used for crop production but also to distribution, availability, access and consumption by the people are required. Accordingly, the plan of action for the Food Policy has statistical input on the aspects of marketing, storage, prices, distribution and availability not only from domestic production but in the situation of deficit availability from imports or other sources, stocks, employment, income and consumption of diversified food for proper nutrition.

2.8 Policy Derivative on NSS

2.8.1 There is an expanding demand for statistics. The 7th FYP expressed the limitation of quality and timely data experienced in the past. It has invoked an inbuilt mechanism of **Result Based Monitoring and Evaluation** of set targets and goals entrusting Planning Commission the focal point of M & E Strategy and specifying prime role of BBS to generate data and indicators and its analysis for the purpose. A brief of agriculture sectoral strategies and policies in 7th FYP, summarised in table below supplements the SPARS development in consonance with the sub sector requirement.

Table 2.1: Synopsis of Agriculture Sub-sector Policies and Strategies for 7th FYP

Crops	Livestock	Fisheries	Forestry	Cross Cutting issues
Sustainable Agriculture and Green Growth	Dairy & Poultry development	Open water fisheries management	Forest conservation and plantations	weather prediction and forecasting
Crop Zoning	Meat Production	Inland aquaculture	Forest produce management – wood , non-wood	Research, gender, HRD,
Land Use Planning	Breed Development	Shrimp and coastal aquaculture	Agro & Social forestry	pest disease management,
Agricultural Inputs	Livestock Research	Marine Fisheries and Exploring Blue Economy	Forest land survey and land records	Credit and Extension, Agro-Processing;
Precision Agriculture	Veterinary Services and Animal Health		Protection of forest eco system	Value Chain development
Diversification – Horticulture	Feeds, Fodder and Animal Management		Watershed management	Good Agricultural Practices
Water use Efficiency	Hides and Skins			
Farm Mechanization				

2.9 In-depth Capacity Assessment of ARS

2.9.1 The recently completed In depth Capacity Assessment (IdCA)⁴ to produce Agriculture and Rural Statistics in Bangladesh as a part of implementation of Global Strategy to improve Agricultural and Rural Statistics (GSARS) reviewed all the major statistical activities relating to agriculture and rural sector carried out by BBS and the line departments, their methodologies, data users' needs and gaps, data duplication and resources availability in different agencies.

2.9.2 The review brought to notice the strengths and weakness in NSS in producing agricultural statistics. The IdCA also took note of the issue of duplication in crop production estimates by BBS and Ministry of Agriculture. Some of the user departments found to be lacking appreciation of statistics in their respective fields of work.

2.9.3 The comprehensive assessment has been made in the context of minimum set of core data and its availability. The identified core data are mapped on the agencies, responsible for their generation. Several datasets relating to minor crops, livestock, fisheries, forestry, farm-gate prices and data on environment were observed to be suffering from one or more deficiencies.

2.9.4 Some key observations from the IdCA capacity assessment synthesis are availability of strong legal framework and existence of appropriate institutions to produce ARS which is in consonance with the observation of NSDS. It has, however, identified need for a separate strategy for agriculture statistics removing financial and human resource constraints, specially training and capacity development. It has also recognized the need for capacity development in user departments to strengthen agricultural market and price information, fisheries and livestock and water statistics. Gaps in several core data and the statistics also needed to be addressed to prepare food balance sheets, commodity balances for crops, stocks, livestock, and agro-environmental indicators.

2.10 SWOT Analysis of Agricultural and Rural Statistics

In Bangladesh, the national statistical system is strong in many respects, though there is much scope to strengthen the system. The Strengths, Weaknesses, Opportunities and Threats of this system are shown below in brief;

Strengths	Weaknesses
1. Statistical Act, 2013 2. National Strategy for the Development of Statistics (NSDS) 3. In-depth Capacity Assessment completed 4. Available Experts in BBS 5. Synergies with 7th Five Year Plan and SDGs	1. Weak Organizational Setup 2. Inadequate Manpower 3. Non-availability of Statisticians in different Ministries/Departments
Opportunities	Threats
1. Integration of Agriculture Statistics with NSS 2. Initiative of FAO and other International Organizations 3. Country wide Organizational Set up 4. Dominance of Agriculture Sector	1. Lack of Fund 2. Lack of Coordination among Ministries/Departments

⁴ Report of IdCA Bangladesh can be accessed at <http://www.gsars.org/report-on-in-depth-capacity-assessment-of-bangladesh-to-produce-agricultural-and-rural-statistics>

3.1 Overview of Agriculture and Rural Statistics

3.1.1 Profile of agricultural and rural statistics has expanded in coverage over years. This now includes crops, livestock, fisheries and forestry cross cutting with the economic, social and environmental dimensions. Besides the activities, production, size and magnitude of farm entrepreneurship, the aspects of trade, resources, inputs, processing, prices, infrastructure demographic and social economic aspects of well-being, macro-economic indicators and environmental data relating to land water and air now fall under the ambit of ARS. This diverse data dimension on one hand is to meet requirements of different stakeholders on the other hand it has to provide meaningful inference to address the aspects of food, livelihood security and well-being of the people.

3.2.2 There is expectation from the system of ARS to provide coherent and consistent set of data. Traditionally the system of ARS was seen from the perspective of crop statistics. In the contemporary context, the statistics on subsectors of livestock and fisheries, production system and market information, value addition, consumption, income, employment have also become significant. These statistics need to be sourced from several statistical operations. Some of these statistical operations such as population, economic and agricultural censuses, crop surveys, social economic surveys and administrative reporting systems are carried out by the NSO and remaining information may be provided by other agencies. Such statistical operations together form the system of ARS. There remains considerable unmet demand of data in the system.

3.2.3 The limitations and constraints in the NSS in general and system of ARS in particular have often surfaced in recent years. The plan to improve system of ARS having multiplicity of the institutions and statistical operations with the respective strengths and weaknesses necessitates strategic thinking and approach.

3.2 Main Statistical Operations related to BBS

3.2.1 Main statistical operation to generate statistics on agriculture and rural sector is the **Agriculture Census** periodically conducted by the BBS. There is considerable improvement in the conduct of decennial Agriculture Census over the years. The Agriculture Census 2008 was fourth in the series and was more comprehensive in geographic and data coverage to provide several benchmark indicators on the aspects of farm and non-farm, rural urban operational holdings in size class, land and crop use with irrigation and variety particulars, livestock holdings and livestock population, some aspects of fisheries, agricultural labourer, farm machinery etc. The population and economic censuses are also major statistical operations providing statistics on select social and economic dimensions of ARS.

3.2.2 Amongst the surveys generating ARS, Agricultural Crop Production (ACP) survey conducted by BBS is one of the main source of national and sub-national estimates of crop area and production for 126 crops. For six major crops, Aus, Aman and Boro paddy and jute, wheat and potato, the yield estimates are based on crop cutting experiments. ACP adopts household interview approach to estimate area of all the crops and yield for the remaining 120 minor crops.

3.2.3 Other statistical operations by BBS concerning ARS are ad-hoc surveys on cost of cultivation for select crops, survey for crop forecast for major crops, household surveys on income expenditure for determination of prevalence of poverty, labour force surveys and computation of national accounts that includes agriculture as sub sector in GDP.

3.2.4 The BBS also holds responsibility of dissemination of ARS through publications, survey reports and through its website. BBS is the nodal agency for human resource management of statistical professionals engaged with NSO and also associated with ARS and foster partnership for development and improvement in methodologies.

3.3 Major Gaps in ARS

In IdCA, all the major statistical activities carried out by BBS and the line departments, their methodologies, data users' needs and gaps, data duplication, resources availability in different agencies, were reviewed with a view to identifying strengths and weakness in NSS in producing agricultural statistics. Several data relating to minor crops, livestock, fisheries, forest data, price data and data on environment have been observed to be suffering from one or more deficiencies, as summarised in the table below:

Table 3.2: Data Gap Analysis undertaken in IdCA.

<i>Data issue</i>	<i>Core Data</i>
Core data collected	Crop statistics, Major crops, Employment, HCI, Animal feed, CPI, Demographic
Core data not collected/ partially collected	Agro-processing, Commodity prices, Food stock, Food balance sheet, Environmental data
Core data collected only through administrative process	Forestry, Trade, Fertilisers, Pesticides, Seeds, Govt. expenditure, rural infrastructure
Core data collected but not at needed frequency	Agriculture machinery
Core data collected but precision is lower than demanded	Crop statistics, Minor crops
Core data collected but methodology lacks soundness	Fisheries, Water use, CPI, rural infrastructure, Land cover and Land use
Core data disseminated with projections on baseline	Livestock and poultry, Trade
Core data by multiple agencies	Crop statistics, Major and minor crops, Livestock and poultry, Trade, Land cover and Land use

3.4 Profile of Core data

A core set of indicators has been identified in Global Strategy to improve Agricultural and Rural Statistics. Country specific core data has also been identified for Bangladesh in In-depth Capacity Assessment report.

3.5 Proposals of IdCA for Improvement of ARS and their present status

Based on the assessment made during the preparation of In Depth Country Assessment report on Agriculture and Rural Statistics, eight proposals were made for their immediate implementation.

Progress of proposals of In-depth Capacity Assessment report is given below:

S.No.	Proposals in IdCA	Present status
I	Development of a Strategic Plan for the improvement of Agricultural and Rural Statistics (SPARS) in Bangladesh	Bangladesh SPARS has been prepared with the support of FAO and going to be finalized within short time.
II	Strengthening the crop estimation system, crop forecasting and crop monitoring for important crops promoting in the process, the use of upfront technologies of GIS and remote sensing.	Existing crop production estimation methodology and crop forecasting methodology reviewed and new methodology recommended through Agriculture Market Information System project supported by FAO. The fund is basically provided by BMGF.
III	Developing an integrated framework of census and surveys for the agriculture and rural sector covering crops, livestock, fisheries, inland water bodies and other such related areas.	BBS is going to conduct Agriculture (Crop, fisheries & Livestock) Census in 2018. A census and survey calendar for ARS has been developed and recommended in Bangladesh SPARS.
IV	Strengthening analytical capacity of institutions involved in the production and use of agricultural and rural statistics to better use the data for management of the sector, policy making and monitoring progress.	BBS is working on the issue under various activities needs to be streamlined.
V	Strengthening the mechanism of coordination, documentation, research and analysis in the NSS for improving agricultural and rural statistics.	Comprehensive coordination mechanism has been developed in Bangladesh SPARS that will be implemented.
VI	Human Capacity Building	Process of reorganization of BBS is going on. Seminar, workshop and training was conducted under AMIS project. BBS will initiate for other regular training with the support of government fund.
VII	Promoting ICT applications in agricultural and rural statistics including promoting appropriate use of technology, hardware and software resources, digitisation of survey frames, data management, national data centre, data dissemination and user interface.	Use of ICT in agriculture statistics for data collection will be partly done by government fund. This will require more effort.
VIII	Sensitising respondents and users for building up trust and reputation of statistical products.	Small scale activities are going on. More initiative is needed.

Chapter IV: Vision, Mission, Strategic Goals, Outputs and Activities for ARS

4.1 Planning Process

4.1.1 The strategic evolution of a comprehensive plan of action for sustainable strengthening of agriculture and rural statistics involves consultative synthesis of national statistical system and its institutional framework. This also addresses diverse data demand of the multifaceted agriculture and rural sector in the perspective of national plan and development policies. This document has prioritised statistical activities to be performed in medium to long term in an integrated manner. The Strategic Plan has to be cost-effective and should meet the expectations of different stakeholders. Following the approach of NSDS, the SPARS has defined mission and vision statement for Agriculture and Rural Statistics System followed by its strategic goals, outputs and the activities to be taken up to achieve targets. Thus, the SPARS is a results based plan of activities resulting in outputs meeting strategic goals and ultimately achieving mission and vision of SPARS.

4.2 SPARS Vision and Mission

4.2.1 Based on the discussion with stakeholders comprising of users and producers of agriculture and rural statistics the following reflects the Vision of Agriculture and Rural Statistics System in Bangladesh.

The Vision of SPARS is:

Agriculture and Rural Statistics System is to be a well-coordinated, integrated and efficient system conforming to international standards and meeting the requirements of stakeholders

4.2.2 To achieve this vision, the mission of the system is the following:

The Mission of SPARS is:

Produce and disseminate agricultural and rural statistics (ARS) in a transparent, timely and user friendly manner, adopting international standards, best practices and latest technologies through strengthening the capacity of producers with human and financial resources to meet contemporary and evolving needs

4.3 SPARS Strategic Goals

4.3.1 The SPARS planning process is basically aimed at helping the stakeholders of agricultural statistics system to identify achievable goals reflecting the reality as highlighted in the assessment of the current status of the agricultural statistical system and designed to accomplish

above stated vision and mission. Core element of SPARS is identification of strategic goals and related outputs that are aimed to be accomplished in a realistic and feasible manner in the implementation phase (5-10 years).

4.3.2 Considering the multiplicity of the factors and crosscutting issues identified in the assessment, the strategic goals are identified keeping in view the multi-dimensional aspects of institutions, statistical operations and methodologies dovetailed to subsector characteristics, human resource and infrastructure, technology and interface with stakeholders and development partners.

4.4 Strategic Goals in SPARS of Bangladesh

4.4.1 The strategic goals of SPARS have been determined on the basis of need of the sector consistent with Statistics Act, 2013, National Strategy for the Development of Statistics (NSDS) and the In-depth capacity Assessment Report on Agriculture and Rural Statistics of Bangladesh. The following strategic goals have been identified for Agriculture and Rural Statistics (ARS) development in Bangladesh.

Strategic Goals of SPARS

- **Strategic Goal 1:** Improve competencies of National Statistical System to produce and disseminate core set of ARS in accordance with international standards and best practices
- **Strategic Goal 2:** Strengthen partnership and coordination among Ministries / Departments and attain harmonized definitions and statistical practices to efficiently produce coherent ARS
- **Strategic Goal 3:** Strengthen capacity to adopt cost effective and scientific survey methodology using sampling frame based on Censuses
- **Strategic Goal 4:** Develop a comprehensive human resources and capacity building mechanism with corresponding organizational setup to ensure participation in policy formulation
- **Strategic Goal 5 :** Improve ICT infrastructure, develop ICT applications for collection, compilation and processing of ARS and establish Integrated Data Management and dissemination system

4.5 Goal-wise outputs and related strategic actions/activities

4.5.1 Strategic Goal 1: Improve competencies of National Statistical System to produce and disseminate core set of ARS in accordance with international standards and best practices

The capability of BBS and Ministries/departments dealing in agriculture related subjects is to be strengthened in producing useful and reliable statistics. There is also need to promote statistics friendly attitude amongst the staff in these Ministries.

To produce reliable statistics, National Quality Assurance Framework for all the census and surveys need be developed. There is also need to establish system of maintaining Statistical Business Process Model (SBPM) in all ARS. Obligation in following the QAF will increase the credibility of statistics and would ensure international comparability.

FAO recommended core set of indicators have suitably adapted in the context of the country. There has to be awareness of these indicators amongst relevant Ministries/Departments so that these indicators could be used for achieving targets, and for monitoring and evaluation of progress. These indicators should also be available to other stakeholders. As BBS has the legal mandate to produce all basic indicators of all the sectors, it also has the responsibility to support and coordinate the statistical activities carried out by other Ministries/Departments and finally endorse these products.

It is essential to ensure the ARS generated in the country is internationally comparable. For this, it is necessary that recommendations of FAO for conducting census and surveys and the guidelines and statistical principles set by UNSD are strictly followed. It is also necessary to assess and utilize the experiences and good practices of other countries. These experiences are shared through relevant Global and Regional Committees and therefore participation in these committees would be useful for improvement of competencies of ARS in the country.

Outputs under the goal:

- (i) Competencies of NSS strengthened
- (ii) Enhanced use of official statistics in planning/decision making process
- (iii) All ARS data follow international standards and quality
- (iv) National Quality Assurance Framework for ARS developed
- (v) Core-set of indicators available according to GSARS
- (vi) Updated methodologies/best practices followed by other countries adopted

Output 1.1 Competencies of NSS strengthened

Statistics Act, 2013 has been enacted in the country to strengthen the National Statistical System (NSS) so that the policy and decision making process in the Government becomes evidence based. The NSDS has identified the process of strengthening the NSS including Agriculture and Rural statistics. The primary goal of SPARS is to develop strategy for improvement of

agriculture and rural statistics. As this sector is concerned with the large number of Ministries and Departments, it is important to establish organisational set-up in those ministries/department to smoothly deliver the reliable statistics in timely manner.

Strategic actions/activities:

- (i) Produce and disseminate reliable and timely agriculture
- (ii) Use up-to-date methodologies in surveys and censuses
- (iii) Provide guidance to other organizations producing statistics
- (iv) Improve professionalism of BBS personnel
- (v) Meet the demand of stakeholders properly

Output 1.2 Enhanced use of official statistics in planning process

For using the statistical findings and its application properly, it is recommended to ensure involving statisticians in preparing the perspective plan as well as the sectoral plan to make it target oriented. Statisticians will set tools there to monitor and evaluate for measuring progress. The idea is to ensure use of base data for monitoring progress.

Strategic actions/activities:

- (i) Involve statisticians in medium/long term planning document of the country
- (ii) Ensure enhanced use of official statistics in administrative management
- (iii) Enhance involvement of statisticians in preparing sector-specific plan

Output 1.3 All ARS data ensure international standards and quality

It is essential to ensure the data internationally comparable. For this, it requires following the recommendations of FAO for conducting census and surveys and the guidelines and statistical principles set by UNSD. It is also important to follow experiences and good practices of other countries shared and disseminated through relevant Global and Regional Committees.

Strategic actions/activities:

- (i) Review the concepts, definitions adopted in collection of ARS in BBS and aligned ministries/agencies
- (ii) Follow the principles of official statistics set by UNSD
- (iii) Review statistical process adopted in producing ARS
- (iv) Assess quality of ARS produced and suggest methods for improvement

Output 1.4: National Quality Assurance Framework for ARS developed

To produce reliable statistics, common census and survey Framework need to be developed describing all the essentials of QAF. This will establish the system of maintaining Statistical Business Process Model (SBPM) in all statistical undertakings of the country. The mere obligation in following the QAF will increase the credibility of statistics and ensure international comparability.

Strategic actions/activities:

- (i) Identify international standards and guidelines for each ARS product
- (ii) Evaluation of existing process for generation of the product in the context of international guidelines

Output 1.5 Core set of indicators available according to GSARS

The core-set of indicators will be acquainted to the relevant ministries/departments so that they can use these data for achieving targets, and for monitoring and evaluation purposes. The FAO recommended core-set of indicators must be available to the stakeholders. As BBS has the legal mandate to produce all basic indicators of all the sectors, BBS also has the responsibilities to support and coordinate the statistical activities carried out by other ministries/departments and finally endorse it. Thus, the core list of indicators can be available through the strengthening of NSS.

Strategic actions/activities:

- (i) Evaluate existing data availability to GSARS
- (ii) Identify data gap to GSARS
- (iii) Conduct new survey and taking proper steps to transform administrative records into official statistics

Output 1.6 Updated methodologies/best practices followed by other countries adopted

BBS has to ensure introducing updated methodologies and best practices followed by the reputed National Statistical Organizations in other countries. The regular cooperation and negotiations will be required to improve the quality of activities of BBS. This can be done through arranging training with foreign experts, study visit, implementing MoU and so on.

Strategic actions/activities:

- (i) Adopt updated methodologies/best practices followed by other countries
- (ii) Review and improve existing methodologies used by BBS in regular interval
- (iii) Organize/participate in national/international seminars on methodological issues
- (iv) Involve academia/experts in designing and implementing census/surveys

4.5.2 Strategic Goal 2: Strengthen partnership and coordination among Ministries / Departments and attain harmonized definitions and statistical practices to produce coherent ARS

Establishing partnership between BBS and other line ministries at an optimum level is the key factor to develop agricultural statistics. For the whole agriculture sector, production statistics of crops, fisheries and livestock and their prices are very important. For this, strong coordination among BBS, DAE, DoF, DLS, and DAM is required. NSDS has clearly recommended maintaining good coordination with line ministries/departments through Memorandum of

Understanding (MoU). BBS will start working immediately with DAE, DoF, DLS and DAM. Statistics Act, 2013 has mandated BBS to produce official statistics. It also empowered BBS in streamlining the data generated by line ministries. BBS is to support, coordinate and endorse the data generated by other line ministries/departments to avoid data duplication in government agencies.

Outputs under the goal:

- (i) Efficient production of coherent and consistent agriculture and rural statistics
- (ii) Improved coordination between BBS and other data producing agencies of ARS
- (iii) Harmonized concepts and definitions used by all ministries/agencies of ARS
- (iv) More administrative data used as official statistics
- (v) Increased participation of stakeholders for assessing data demands

Output 2.1: Efficient Production of coherent and consistent agriculture Statistics

The primary goal of SPARS is to produce coherent and consistent agriculture and rural statistics. One of the key factors for development of ARS is close partnership and coordination of BBS with agriculture related Ministries. There is a need to form a committee duly recognized under the Statistics Act, 2013 for coordination and monitoring the process of implementation of SPARS.

There is also need to issue a notification/ Government order from BBS clearly stating the statistical products to be brought out by each Ministry/Department in agriculture related activities along with periodicity and timeliness.

Strategic actions/activities:

- (i) Development of integrated calendar for Census and surveys for ARS
- (ii) Organize regular training with updated manual for field staff

Output 2.2 Improved Coordination among data producing agencies of ARS

To achieve better coordination among agencies engaged in production of ARS, it is necessary to prepare a compendium of standard concepts and definition used in ARS. This would be required to be prepared in close cooperation and consultation with all the concerned departments. BBS will have to take the responsibility of bringing out this compendium. In this process, inconsistent definitions, if any, would also get streamlined and uniform and internationally accepted definition would be adopted and used for future data collection and dissemination. Preparation of MoU among other related ministries /departments will facilitate to improve the quality of ARS product.

According to the responsibilities stipulated in MoU, coordination with related departments will be done. The MoU can be prepared on the basis of following matrix;

Sl. No.	Survey Name	Implementing Agency	Line Deptt.	Areas of Coordination
1.	Crop Area and Yield Survey (Annual)	BBS	DAE	1. Preparation of SF 2. Preparation of Survey Calendar 3. Preparation of Table 4. Preparation of Survey Manual 5. Training at headquarter & field offices 6. Supervision activities 7. Finalizing Report
2.	Fish Production Survey (Annual)	DoF	DoF	
3.	Livestock Survey for Main Livestock (Annual)	BBS	DLS	
4.	Survey on Price of Agricultural Produces	DAM	DAM	

BBS will initiate this immediately to follow. This mechanism will be implemented with other ministries/departments gradually. This process will contribute practicing harmonized concepts and definitions and establishing statistical standards.

Strategic actions/activities:

- (i) Setting up coordinating body under the Statistics Act, 2013 on all matters relating to ARS
- (ii) Establish partnership with ministries/ departments and delegation of responsibility relating to production and release of ARS to each concerned ministry/ department
- (iii) Establish coordination through MoU for defining responsibilities
- (iv) Appoint focal point official of line ministry/department to BBS for coordination

Output 2.3 Harmonized concepts and definitions used by all ministries/agencies of ARS

BBS has to take initiative to harmonize the concepts and definitions related to ARS that is used by different ministries and departments. This activity is prime to avoid discrepancies of data among the agencies. Necessary publication on all the definitions and concepts will be prepared and circulated.

Strategic actions/activities:

- (i) Prepare compendium of standard concepts and definitions on ARS
- (ii) Update concepts and definitions in accordance with the recommendations of international agencies
- (iii) Conduct review meeting with stakeholder

Output 2.4 More administrative data used as official statistics

Optimum coordination between BBS and other ARS related ministries/departments will increase the use of administrative data as official statistics. BBS will ensure necessary support and guidance other agencies to keep their administrative records systematically and preparing own data bank. This will minimize the burden on BBS to generate official statistics.

Strategic actions/activities:

- (i) Develop new statistical products from administrative system of agriculture related ministries
- (ii) Collaborate line ministries/agencies to preserve administrative records systematically

Output 2.5 Increased participation of stakeholders for assessing evolved data demands

BBS needs to institutionalize the mechanism for continuous assessment of data demand of stakeholders. For this, BBS can organize consultation workshop on stakeholder's opinion. Assessment of data needs through structured questionnaire is essential instrument to identify current data needs.

BBS needs to be familiarized with the changing concepts and domains of agricultural activities. The sustainable agriculture and the Good Agricultural Practices (GAP) are the issues like that. BBS needs to collect this type of data to facilitate decision making process through providing data on current issues and practices.

Strategic actions/activities:

- (i) Conduct ad-hock survey on data demand
- (ii) Organize meeting/consultation workshop on use of agricultural and rural statistics
- (iii) Assess SDG indicators/other relevant policy documents and determine data gap

4.5.3 Strategic Goal 3: Strengthen capacity and adoption of cost effective and scientific survey methodology using sampling frame based on Censuses

To achieve the goal, the following ten (outputs) are planned to be generated. These outputs will be achieved by set of activities described in each case.

Outputs under the goal:

- (i) Structural data on crops, livestock and fisheries are available generated from related censuses
- (ii) Sampling Frames using census data base for annual survey on production of crop, fisheries and livestock developed
- (iii) Census and Survey Calendar related to ARS followed
- (iv) Annual Crop production survey conducted using improved methodology
- (v) Annual fish production survey conducted using improved methodology
- (vi) Annual livestock production survey conducted using improved methodology
- (vii) Annual survey on livestock resources, input cost of crops, fisheries and livestock conducted using improved methodology
- (viii) Annual food balance sheet prepared
- (ix) Survey on private food grain stock (supply and value chains) conducted
- (x) Survey on irrigation system conducted
- (xi) Survey on land use conducted

- (xii) Survey on forest product conducted
- (xiii) New databases to measure Natural Resources (land, Water and Air) changes developed

Output 3.1 Structural data on crops, livestock and fisheries are available generated from relevant censuses

The most important activity for conduct of scientifically designed sample survey is to carry out Agriculture Census. BBS has been conducting agriculture census decennially to collect, compile and disseminate data on structural changes of agriculture sector over long period of time. Statistics generated from agriculture census is also disseminated at division/district/upazila/union/ mauza levels. To measure inter-censal annual changes, sample surveys are being conducted to provide estimates with minimum time, cost and effort. The statistical sample survey methodology adopted for the purpose provides information close to actual information. This information is effectively used in estimation of value addition of sector to GDP, food management, monitoring and evaluation of sectoral progress and policy/ plan formulation.

BBS is planning to conduct next Agriculture Census in 2018 covering crops, fisheries, livestock, and forestry and environment sectors in an integrated manner following modular approach to data collection. This approach will be cost-effective for generating reliable ARS and will increase the scope for analysis covering social, economic and environmental dimension of activities in the sub-sectors. This integrated approach to Census and Survey planning will facilitate establishment of sampling frames to support future surveys.

The forthcoming Agriculture Census is intended to comply with the recommendations of FAO World Programme for Census of Agriculture (WCA 2020) which is for the period 2016-2025. The modular approach proposed to be followed in Agriculture Census 2018 will be an extension of the modular approach used in the last Agriculture Census 2008 with a view to capture more data on items keeping in view the demands from sub-sectors of fishery and livestock. The census will be designed keeping in view follow-up surveys. Core Census module will collect data on structural items which will be more or less the same as the Agriculture Census 2008 so as to allow measurement of change since the last census. Key questions on fisheries, livestock and forestry will be included to provide crucial structural data on these sectors.

Strategic action/activity:

- (i) Conduct agriculture census covering crops, fisheries and livestock sub-sectors

Output 3.2 Sampling Frames using census data base for annual survey on production of crop, fisheries and livestock developed

One of the essential prerequisite for conducting scientifically designed statistical surveys is the Sampling Frame. A suitably designed Census provides such frames for follow up surveys for more detailed data aspects. Considering a very large data requirement on the diverse aspects of crops, livestock and fisheries and the gaps and limitations in the existing data system, it is

envisaged to develop sample frames from the agriculture census. The annual production survey on crop, fisheries and livestock, cost of production and other agriculture related household and farm survey would be conducted on the basis of master sample frame.

There has been recommendation of FAO that follow up surveys should be carried out using Sample frames which may help integrate data on different aspects. Further, issues relating to food security or poverty can be properly understood only if it is possible to analyse the data in comprehensive manner. However, keeping in view the conditions in each country some integration should be achieved.

BBS itself will prepare sampling frames for annual crop production, fisheries and livestock and other related survey with the adequate involvement of DAE, DoF and DLS.

Strategic actions/activities:

- (i) Develop Sampling Frames to meet requirement of crop, livestock, fishery and forest surveys
- (ii) Establishing a Census /Survey Methodology Wing in BBS for guiding the survey designs for the surveys to be carried out by BBS and other ministries/ department

Output 3.3 Census and Survey Calendar related to ARS followed

To facilitate long term sectoral plan, food management, estimating contribution to GDP and market price data available, there should be programme of census and survey that would be conducted regularly or ad-hock basis. Keeping this into consideration the evolved census/survey calendar (appendix-) needs to be followed.

Strategic action/activity:

- (i) Conduct Agriculture, Fisheries and Livestock Census and other necessary Surveys following Census/survey calendar
- (ii) Develop methodology and generate data on good agricultural practices

Output 3.4 Annual crop production survey conducted using improved methodology

The economic contribution of crop sub-sector to Gross Domestic Production annual crop production estimation is inevitable. For the sake of accurate GDP calculation, the annual crop production (acreage, yield and total production data and their economic value needs to be calculated using improved methodology. BBS has taken substantial steps to improve crop estimation methodology with the support of FAO. This also includes **production forecasting fore casting and crop monitoring**. The survey method has been recommended for crop forecasting. On the other hand, using econometric model as well as RS data is also recommended for crop forecasting.

Strategic action/activity:

- (i) Design and prepare sampling frame and conduct annual crop production survey

Output 3.5 Annual fish production survey conducted using improved methodology

The annual production of fish is required for many purposes. One of them is to know the economic value for GDP calculation. The Department of Fisheries is currently providing this estimation using the methodology as well as sample design that requires being up-dated. After the Agriculture Census 2018, the new sampling frame will be reconstructed for reliable and authentic estimates of annual fish production. Department of Fisheries will have to take support from BBS in this regard.

Strategic actions/activities:

- (i) Design and prepare sampling frame and conduct annual fish production survey (inland)
- (ii) Generate annual production of marine fish

Output 3.6 Annual livestock production survey conducted using improved methodology

Bangladesh has been facing serious difficulty in getting latest and current information on output of livestock products. At present the information for years subsequent to the year Agriculture Census is carried out, is projected based on past trends and other ancillary information. This does not reflect the correct situation. There is a need to take up specific annual survey for the purpose. Thus, the activity for the purpose is to design and implement Integrated Sample Survey for Livestock Products. BBS may do this with close cooperation of Department of Livestock Services.

Strategic action/activity:

- (i) Design integrated sampling frame for livestock and conduct annual survey

Output 3.7 Annual surveys on input costs of crops, fisheries and livestock conducted using improved methodology

Survey on cost of production is used mainly for the purpose of government procurement and for GDP calculations (value addition issues). As it is very important BBS needs to conduct regular input cost survey for major cereal crops and input cost survey for other crops, fisheries and livestock with certain periodicity to improve this information. For improvement of these estimates, FAO guidelines on input cost survey may be useful.

Strategic actions/activities:

- (i) Design and conduct annual input cost survey for major cereals and other crops
- (ii) Design and conduct input cost survey for production of fish on regular interval
- (iii) Design and conduct input cost survey for livestock production on regular interval

- (iv) Design and conduct survey on supply chain and value chain of crops, fisheries and livestock production
- (v) Design and conduct livestock resources survey on half decadal basis

Output 3.8 Annual food balance sheet prepared

Bangladesh Bureau of Statistics has recently prepared Food Balance Sheet for the years 2009 to 2013 under the support of Food and Agriculture Organization (FAO) of United Nations. This work has to be continued and annual Food Balance sheet should be prepared for each year. A time line in this regard also should be decided.

Strategic action/activity:

- (i) Prepare food balance sheet annually

Output 3.9 Survey on Private Food Grain Stock conducted

In consideration of supporting the scientific food management, annual/ad hock survey on measurement of private stock of food grain is essential. BBBS is conducting this survey for the first time in 2017 with support of FAO. BBS may follow the guidelines provided by FAO describing the sampling frame/methodology and the questionnaire of this survey. This survey is crucial as the marketable surplus of food grain can be known through this survey.

Strategic action/activity:

- (i) Conduct annual/ad-hock survey on private stock of food grain survey on supply and value chain

Output 3.10 Survey of irrigation systems conducted

Bangladesh has regularly compiled information related to major large irrigation projects. The information from these projects relates to area cultivated, type of crops etc. However, the information on irrigation by minor irrigation systems is not captured. There is a need to carry out such survey so that comprehensive information on irrigation is available. There are also some issues relating to definitions and concepts used in collection of information at present. There is a need to develop survey guidelines keeping in view international standards. The survey of minor irrigation projects should be introduced.

Strategic action/activity:

- (i) Develop survey guidelines and conduct survey on irrigation

Output 3.11 Survey on Land Use conducted

There is a need to adopt latest land use classification in land use surveys specially keeping in view the emerging demands from SDGs for sustainable development and measurement.

Therefore, the Land Use classification presently in use should be revisited in the context of latest guidelines and adopted.

Strategic action/activity:

- (i) Revisit land use classifications and compile land use statistics

Output 3.12 Survey on forest product conducted

There are many forest products and its economic value which may not be available in other surveys. Specialized type of survey is needed to be conducted for this.

Strategic action/activity:

- (i) Conduct survey on forest products

Output 3.13 New databases to measure Natural Resources (land, Water and Air) changes developed

There is increasing concern towards natural resource management, degradation of natural resources and its effect on climate change. Sustainable Development Goals have placed special emphasis on sustainability of such development processes which do not adversely affect natural resources. There are sporadic data collection on the issues relating to Soil degradation, pollution in water especially due to agricultural practices adopted or fishery activities undertaken and emission in the environment specially emission due to agriculture. There is a need to develop guidelines for collection of regular information on each of the parameters to be identified after detailed deliberations keeping in view the context of the country and international standards. The parameters have to be representative of various provinces, Zila and Upazilas so that action points may be identified. There would be requirement for interaction with the officers of the concerned Ministries/ Departments and also outside experts. International expertise may also be required for the purpose.

Strategic action/activity:

- (i) Conduct survey on soil degradation, water pollution, air pollution and emission in the environment due to agriculture

4.5.4 Strategic Goal 4: Develop a comprehensive human resources and capacity building mechanism with corresponding organizational setup

The capability of Ministries/Departments dealing in agriculture related subjects is to be strengthened in producing useful and reliable statistics. It is also necessary to promote statistics friendly attitude amongst the staff dealing various subjects in these Ministries. There is a need to develop a comprehensive human resource development plan for ARS system. The human

resource plan will be based on engaging adequate work force having statistics background in BBS and Ministries/Departments to establish sound statistical system in the country.

Outputs under the goal:

- (i) Qualified personnel in BBS and other ministries/departments having statistics background available
- (ii) Statistical cell in planning wing of different ministries/departments established
- (iii) Training facility created with faculty of agriculture statistics
- (iv) Training of personnel involved in Agriculture Statistics provided
- (v) Agriculture wing, BBS reorganized
- (vi) Price data system of DAM strengthened
- (vii) Remote Sensing Data Analysis Unit in Agriculture Wing of BBS created

Output 4.1 Qualified personnel in BBS and other ministries/departments having statistics background available

Recruiting sufficient number of statistics graduates in BBS is the prime step. In each ministry and department, statisticians should be recruited to prepare data base through systematic use of administrative data/records. For this, each ministries/department will have to create posts of statisticians in their own organizational set-up. They will work in coordination of BBS and will be able to formulate their administrative data in a systematic way. This will help in preparing data bases of their own and increase the use of statistics.

Strategic actions/activities:

- (i) Increase the number of statistics graduate in recruiting statistics officer in BBS
- (ii) Advocate the necessity of creating the post of statistics officer in planning wing of all ministries/agencies

Output 4.2 Statistical cell in planning wing of different ministries/departments established

A Statistical cell will be required to establish in the Planning Wing of each Ministry to assist in planning and plan formulation. Statistical officers from BCS (Statistical) cadre under the administrative control of Statistics and Informatics Division, Ministry of Planning can be appointed in these positions. These officers will work in ARS related Ministries to coordinate with BBS and other Ministries/Departments. They will also help in developing data bases by extracting the information from the administrative records according to the principles and methodologies recommended by BBS. This will create congenial working environment for effective use of administrative data for decision making. It will also help in meeting evolving demand of statistics in different Ministries/Departments in a cost effective and timely manner, and would ensure harmonization of concepts and definitions across different ARS producers.

Strategic actions/activities:

- (i) Setting up of statistical cells in each ministry and reorganization of Agriculture Statistics Wing of BBS
- (ii) Placing the issue to competent authority and execute

Output 4.3 Training facility created with agriculture statisticians in the faculty

A Statistical Training Academy aligned with BBS under SID is required to be established to ensure that all personnel working in the area of statistics are regularly trained and remain abreast with the latest developments. A faculty of agriculture statistics will be needed with sufficient number of members. They will develop course curriculum for short and long term training on agriculture statistics. They will also involve in research activities with agriculture, fisheries and livestock census data and contribute policy planning for the sector. Reputed national and international experts can be invited for lecturing on agriculture statistics.

The training Academy will be required to work in coordination with other related organization like Agriculture University, ISRT etc. The area of cooperation will be in designing of course curriculum, providing experts for training, establishing long term training courses etc. This can be done through signing MoU with these organizations.

Strategic actions/activities:

- (i) Establishing Statistics Training Academy
- (ii) Creation of Faculty of Agriculture Statistics in Training Academy with research cell
- (iii) Establish coordination between Statistics Training Academy and Agriculture University and ISRT

Output 4.4 Training of personnel involved in Agriculture Statistics provided

Proper development of Agriculture and rural statistics would be possible only if the personnel engaged in the collection; compilation and analysis of the data are kept updated with the latest developments in the field. The training academy will conduct sufficient number of quality training course for BBS officials and relevant officials of other Ministries and Departments. It has to formulate short/long term training course on agriculture and rural statistics, specific training programmes for crop, fisheries, livestock and other sort of census and surveys. Faculty in this training facility should have trainers in the field of agriculture statistics. Significant activities need be taken to ensure that more trained ARS personnel are available in NSS.

Strategic actions/activities:

- (i) Keep provision for training on agricultural statistics in the NSS training plan
- (ii) Prepare training plans and update every year
- (iii) Prepare training course, modules and curricula
- (iv) Implement training plans
- (v) Strengthen capacity to produce agriculture statisticians

Apart from training in Bangladesh, there would be need for regular updating the personnel through participation in international training, workshop and conferences.

Output 4.5 Agriculture Wing in BBS reorganized

There is increasing activity in horticulture, livestock and fishery sector in the country. BBS in its agriculture wing is not in a position to adequately focus in generation of statistics in these sectors. Statistics generated from the concerned Ministries is also at times not timely and not in accordance with fundamental principles of official statistics. To address the weakness effectively, it is felt that the present agriculture wing may be divided in two wings: (i) **Agriculture Statistics (Crops and Land use) Wing, and (ii) Agriculture Statistics (Fisheries, Livestock & Others) Wing.** Agriculture Statistics (Crops and land use) Wing will handle only crops and land use statistics which will include crop production, horticulture and vegetable crops including spices etc. Agriculture Statistics (Fisheries, Livestock and Others) Wing will handle statistics relating to livestock, fisheries, forestry and others.

Strategic actions/activities:

- (i) Review of strength of staff in agriculture wing of BBS in the context of added responsibility to produce core statistics recommended by FAO
- (ii) Identification of shortages with specific nature of jobs
- (iii) Creation of two wings- Crop and Fisheries, Livestock, Forestry & others
- (iv) Approval for creation of posts
- (v) Filling of posts

Output 4.6 Agriculture Price Data System of DAM Strengthened

Considering the necessity of strengthening the agriculture price information system is very important to strengthen Department of Agricultural Marketing (DAM) to improve price data collection System of Agricultural Produces. Existing staff in DAM is not adequate for collecting price information to capture price volatility at Upazila level. Strengthening is required for supporting and protecting farmers' interest as well as sustainable agricultural development.

Strategic actions/activities:

- (i) Expand the organizational structure of Department of Agriculture Marketing (DAM)
- (ii) Improve data collection methodology by DAM with support of BBS
- (iii) Conduct ad-hock survey by DAM for collecting price data

Output 4.7 Remote Sensing Data Analysis Unit in Agriculture Wing of BBS created

A unit of Spatial Data Analysis under proposed Agriculture Economics Statistics (Crops) Wing will be required for improvement of crop area and land use statistics. The unit will also use satellite data in conjunction with data on meteorology, soil condition, temperature etc. Adequate number of experts will be required for the purpose.

Strategic actions/activities:

- (i) Creation of remote sensing unit in proposed Agriculture Economics Statistics (Crops and land use) Wing
- (ii) Generate RS based crop statistics

4.5.5 Strategic Goal 5: Improve ICT infrastructure, develop ICT applications for collection, compilation and processing, and establish Integrated Data Management and dissemination system for ARS

Conduct of surveys on agriculture related subjects is primary activity for generation of ARS. Survey work is carried out by BBS and Agriculture related Ministries / Departments throughout the year. Availability of reliable and timely data is possible only through the use of ICT. Therefore, there is a need to develop required infrastructure in BBS and other data collecting organization like DoF, DAM both in the field and headquarter. Personal Data Assistant / tablets/ laptops need be used for collection of data from the field. The data should be transferred from the field using telecommunication network and should be processed and compiled at the headquarter of these Ministries. For BBS, agriculture data may be processed and compiled in agriculture wing with the help of ICT trained personnel. This will facilitate quick dissemination and timely use of data. Using the ICT would result in minimization of cost and time, and also substantial reduction in non-sampling errors.

Outputs under the goal:

- (i) Statistical products generated using ICT tools
- (ii) Infrastructure for using GIS and Remote sensing techniques developed
- (iii) Meta data on each AR statistics product available
- (iv) Visibility of AR statistical product in public domain improved
- (v) Data sharing protocols developed
- (vi) Integrated data dissemination platform established

Output 5.1 Statistical products generated using ICT tools

There has been increasing use of ICT tools in collection, compilation processing and dissemination of statistics. This capability should be further strengthened. There are number of ICT tools available for Data Collection. CAPI of the World Bank is one tool. There are many similar products available in the market. There is a need to assess this tool and suitably adopt in data collection process. These tools may also be required to be customised to meet the requirement of a particular survey. Internet based systems may have to be developed to transfer the data from the field to a server after due validation. Such system will have to be introduced for each of the survey undertaken by BBS and the Ministries/ Department dealing in agriculture and rural statistics.

Strategic action/activity:

- (i) Use of GIS/ Remote Sensing and other ICT applications for collection of agriculture related statistics

Output 5.2 Infrastructure for using GIS and Remote Sensing data developed

GIS and Remote Sensing technology is currently used for generating land use information. It is commonly used for estimating crop area and for estimating crop yield even. The RS technology is useful for production forecasting and crop monitoring. In Bangladesh SPARSO is generating area coverage for boro and aman crop. However, the information for other crops is not available due to pre-occupation of SPARSO with its own mandate. Further the Geographic information need be further analysed with data from meteorology and related departments. It is therefore necessary that an inter-disciplinary crop forecasting mechanism is to be developed in coordination of agriculture wing of BBS. BBS needs a set-up of RS for providing crop coverage as this activity is prominent in agriculture statistics.

Strategic actions/activities:

- (i) Develop required infrastructure
- (ii) Human capacity building for use of GIS and Remote sensing
- (iii) Develop integrated data management system

Output 5.3 Meta data on each AR statistical product available

Proper documentation of metadata needs to be preserved in all statistical activities incorporating information like (i) Data Collecting Agency, (ii) Data Collecting Frequency, (iii) Data Collection Methodology, (iv) Data Collection Staff, (v) Sample Size, (vi) Sample Selection (vii) Frame, (viii) Data Collected, (ix) Data Processing, (x) Data Dissemination, (xi) Level of disaggregation, (xii) Timeliness of data release, (xiii) Latest data available etc.

Strategic action/activity:

- (i) Prepare of meta data of each AR statistical product

Output 5.4 Visibility of AR statistical product in public domain improved

A good coordinated system of data sharing and dissemination is proposed to be established so that the user can easily find the data in a same web-page getting the links of the relevant data.

Strategic actions/activities:

- (i) Improve user participation in AR statistics usage, identification of new data needs and further action
- (ii) Organize Agriculture and Rural data user's workshop
- (iii) Establish a modality to measure user satisfaction

Output 5.5 Data sharing protocols developed

The Bangladesh Bureau of Statistics will need to develop data sharing protocols with national and international agencies. This will create more visibility of data. The scope of deeper analysis and uses of data will be increased that will further improve planning process.

Strategic actions/activities:

- (i) Disseminate data in common management
- (ii) Prepare Rules and Regulations of data sharing

Output 5.6 Integrated data dissemination platform established

An integrated approach should be followed in dissemination of agricultural and rural statistics where BBS and all the relevant Ministries/ Department would participate. This would require a coordinated arrangement on behalf of the Government where BBS will play central role. A national Data Repository on ARS shall be established in BBS. ARS data would be accessible to the users and stakeholders through the website of BBS which will provide linkages with the websites of other relevant Ministries. The arrangement of such sharing will be developed by signing of MOU between BBS and other Ministries.

Strategic action/activity:

- (i) Create central data hub with BBS's coordination

Detailed Strategic **goal-wise outputs, strategic actions/activities and objectively verifiable indicators** are presented in the **Logical Framework Document at Annex-IV**.

CHAPTER V: IMPLEMENTATION, MONITORING & EVALUATION, FINANCING AND ADVOCACY

5.1 Implementation of SPARS

5.1.1 Strategic plan on ARS is a document for future activities for meeting the national and international demand for data conforming to the global standard. The future activities must be executed through institutional process and the institutional responsibilities shall be distributed to implement the projected activities in a timely manner. The plan will help to implement the programme effectively and efficiently. The activities and Objectively Verifiable Indicators have been listed in Logical Framework for each implementing institutions for achieving the strategic goals of SPARS. The ARS will meet the requirement for policy makers, development organizations and measure the performance indicators of specific sectors through implementation plan and appropriately execution of plan.

5.1.2 SPARS will be implemented by the Government of Bangladesh through BBS being the focal organization and all the agriculture related Ministries/ Departments. Responsibility for implementation on each of the activities identified in Logical Framework will have to be assigned to each agency under the guidance of Coordination and Monitoring Committee. Apart from technical issues, this committee will also ensure that adequate resources, both financial and human, are provided for implementation. The Committee may setup sub-committees or technical working groups keeping in view the need for an activity and kind of guidance / assistance required. The Committee will review on the progress of work done and provide guidelines for implementation.

5.2 Monitoring & Evaluation

5.2.1 There should be a monitoring strategy for SPARS. It is expected that BBS as the custodian of SPARS should keep track of the implementation of SPARS activities with support from other line ministries. The Objectively Verifiable Indicators listed in the Logical Framework for SPARS should be used for monitoring purposes. Apart from half yearly review of the progress, Mid-term review of the progress may be done by the coordination and monitoring committee so that any course correction, if required, may be done.

5.2.2 As the SPARS is designed to improve the agriculture and rural statistics, it will require to establish the follow-up process for proper implementation of SPARS. For this, a national committee headed by Secretary, Statistics and Informatics Division is recommended to form where Director General, BBS may act as Co-chair of the committee. The committee will include the main stakeholders of agriculture and rural statistics. The committee will evaluate the progress of implementation of SPARS for monitoring and provide guidelines to BBS for achieving the SPARS goals.

5.3 Financing

5.3.1 Immediate External Resource requirement 2017-2020

At present the external resource requirement has been identified on two items: Agricultural Census and setting up of crop forecasting centre. Details are given below:

1. Agricultural Census 2018

At this stage most important priority for the Government is to conduct an Integrated Agriculture (Crop, Livestock, Fishery and Forestry) Census planned for 2018. The project document is yet to be approved with a proposed budget BDT 34.50 million. This activity is the basis of establishment of Integrated National Survey Calendar based upon Sampling Frames. Keeping in view the technical support to other similar Censuses, it is expected that there will be a need for about USD 0.75 to 1 million. This assistance would be required on items like Census Planning (USD 150 thousand), Conduct of Census (USD 100 thousand), trainings and study tours (USD 50 thousand), IT hardware and software (USD 100 thousand), tabulation and dissemination (USD 200 thousand), Establishments of sampling frames (USD 100 thousand) and Data archiving, fine tuning survey calendar and preparing appropriate sampling designs etc.

5.3.2 Financing through Five Year Plans

The main thrust of BBS work in the next three years will be conduct of Agricultural Census which is a major national undertaking. A clearer picture of partnerships and Work Plan will emerge during/after the census, particularly on fish and livestock sub-sectors.

The implementation of SPARS will be reviewed sometimes in 2019, and revised SPARS would have more precise work plan of activities. At that stage it will also be possible to estimate the resource requirements more precisely as scope of many statistical activities would have been clarified by that time. It is also expected that SPARS will be fully integrated in the Eighth Five Year Plan. The planning for the eighth plan (2021-25) will begin in 2019. Based on clearer picture at that time, line ministries may also propose for funding SPARS activities through their national budget.

5.4 Advocacy

4.1.1 It is expected that the SPARS document will be endorsed through due government process involving all the stakeholders. After this is accepted as a government document, consultative sessions will be organized with development partners to elicit their interest in supporting any of the identified activities.

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ANNEX-I: LIST OF MINISTRIES/ORGANIZATIONS ALIGNED WITH ARS

SL. No	Ministries /Departments	Relevant Core Data Items	Statistics generated by
01.	Statistics and Informatics Division	Rural Urban Demographics, Household Income Expenditure & Consumption Status, Rural-urban Migration	MoP, SID, BBS
02	Bangladesh Bureau of Statistics	Rural Urban Demographics, Household Income Expenditure & Consumption Status, Rural-urban Migration	MoP, SID, BBS
03.	Ministry of Agriculture (MoA)	Land Use and soil, Area and Yield of Crops (irrigated and variety), Input Cost of Crop Production, Irrigation, Pesticide, Insecticide, Fertilizer, Agriculture Labour Wage, Food Storage/ Stock, Price of Agriculture Products, Seed, Feed, Wastage, Food Balance Sheet, Employment Generation / Gender, Agriculture Land Ownership, Agriculture Credit, Food Processing, Value Chain, Food Consumption and Nutrition Data Needs for Good Agricultural Practices (GAP), Food Safety, and Sustainable Agriculture	BBS, DAE, MoA, DAM, BADC, MoFood, LGD
04.	Department of Agricultural Extension		
05.	Bangladesh Agricultural Development Corporation		
06.	Ministry of Food		
07.	Food Planning and Monitoring Unit		
08.	Space Research and Remote Sensing Organization		
	Department of Agricultural Marketing		
10.	Ministry of Finance	Budget for Agriculture Sector	MoF
11.	Ministry of Fisheries and Livestock	Fish and Aquaculture Production, Input Cost of Fish Production, Inputs and Instruments, Agro-processing and Value Chain, Prices, Employment Generation	DoF, BBS
12.	Department of Fisheries		
13.	Department of Livestock Services	Livestock and Poultry Production, Age-specific Population of key Livestock and Poultry, Feed and Fodder, Livestock Resources Survey, Input Cost of Livestock and Poultry Production, Processing and Value Chain, Prices, Employment Generation	BBS, DLS
14.	Bangladesh Bank	Export-import Data of Agricultural Products	BB, BBS
15.	Ministry of Water Resources	Water Used for Irrigation,	MoWR,

SL. No	Ministries /Departments	Relevant Core Data Items	Statistics generated by
16.	Bangladesh Water Development Board	(natural/mechanized)	BWDB
17.	Ministry of Environment and Forestry	Soil Degradation, Water Pollution, Air Pollution, Emission	MoEF, SRDI
18.	Department of Environment		
19.	Bangladesh Forest Department	Forest Area, Forest Produce (Main / minor), Employment Generation	BFD
20.	Bangladesh Meteorological Department	Average rainfall, average temperature, sunlight statistics, flood, cyclones	BMD
21.	Ministry of Local Government, Rural Development and Co-Operatives	Rural infrastructure, Road Communication in Rural Areas, Rural Electrification, Rural Credit, Railway Communication, ICT Infrastructure	MoLGRD, LGED, BRDB, BREB, BKB, PKSf, BR, BBS
22.	Ministry of ICT		
23.	ICT Division		
24.	Local Government Division		
25.	Local Government Engineering Department		
26.	Bangladesh Rural Development Board (BRDB)		
27.	Bangladesh Rural Electrification Board (BREB)		
28.	Bangladesh Railway		
29.	Bangladesh Krishi Bank		
30.	Polly Karmo Shahayak Foundation		

ANNEX-II: INTEGRATED CENSUS AND SURVEY CALENDAR

Integrated Census and Survey Calendar			
	Name of Census/Survey	Frequency	Status
	A. CORE ARS CENSUS AND SURVEYS		
A1	Integrated Agriculture Census including supplementary Modules on Crops, Livestock, Fisheries etc.	Decadal	On-going
	A2. CROPS		
A2.1	Survey on Area and Yield (6 Major and 120 Minor Crops)	Annual	On-going
A2.2	Survey on Forecasting of Crop Production	Annual	On-going
A2.3	Survey on Summer Vegetable Crops	Annual	On-going
A2.4	Survey on Winter Vegetable Crops	Annual	On-going
A2.5	Survey on Fruit Crops	Annual	On-going
A2.6	Survey on Pulse Crops	Annual	On-going
A2.7	Survey on Farm Machinery	Ad-hoc	Proposed
A2.8	Survey on Quantity of Private Food Grain Stock	Ad-hoc	Proposed
A2.9	Survey on Agricultural Labour Wage	Monthly	On-going
A2.10	Cost of Production and Input Use Survey on Important Crops	Annually for selected crops	On-going
	A3. LIVESTOCK		
A3.1	Specific Surveys on Livestock Products (Meat, Milk, Eggs etc.)	Annual	Proposed
A3.2	Cost of Production and Input use for Livestock Products	Annual	Proposed
A3.3	Livestock Resources Survey	Half decadal	Proposed
	A4. FISHERIES		
A4.1	Fisheries Resources Surveys	Decadal	Proposed
A4.2	Fisheries Frame Survey (Instruments and Means of production)	Quarterly	Proposed
A4.3	Survey on Cost of Production and Inputs in Aquaculture	Annual	Proposed
A4.4	Fish Production Surveys (Culture and Capture)	Annual	On-going
	A5. ENVIRONMENT, FORESTRY & NATURAL RESOURCES		
A5.1	National Socioeconomic Surveys on Forestry	Ad-hoc	Proposed
A5.2	National Forest Inventory (Reserve and Social)	Ad-hoc	Proposed
A5.3	Supply and Demand of Forest Products	Ad-hoc	Proposed
A5.4	Social Forestry Survey	Ad-hoc	Proposed
A5.5	Non-timber Forest Products (Wood, Honey etc.)	Ad-hoc	Proposed
A5.6	Fuel wood Consumption Survey	Ad-hoc	Proposed
A5.7	Forest Based Industries and Machineries	Ad-hoc	Proposed

Integrated Census and Survey Calendar

	Name of Census/Survey	Frequency	Status
	A. CORE ARS CENSUS AND SURVEYS		
A5.8	Afforestation and Deforestation	Ad-hoc	Proposed
A5.9	Survey on Natural Resources (Including Soil Degradation, Water Pollution, Mineral Extraction etc.)	Ad-hoc	Proposed
	A6. AGRICULTURE MARKETING		
A6.1	Survey on Farm-gate and Market Prices of Agriculture Produce	Annual	Proposed
A6.2	Survey on Supply and Value Chain of Private Stock of Food Grains	Ad-hoc	On-going
	A7. RURAL ACTIVITIES		
A7.1	Survey on Agro. Processing Activities	Half decadal	Proposed
A7.2	Survey on Small and Cottage Industries	Half decadal	Proposed
A7.3	Rural Infrastructure and Community Survey (along with Agriculture Census)	Decadal	Proposed
	B. OTHER CENSUS AND SURVEYS CONTRIBUTING TO ARS		
	B1. Census Contributing to ARS		
B1.1	Population and Housing Census	Decadal	On-going
B1.2	Economic Census	Decadal	On-going
B1.3	Marginalized Community Census	Ad-hoc	On-going
	B2. Survey Contributing to ARS and Official Statistics from Other Sources		
B2.1	Inter-censal Survey on Demographic and Social Indicator	Annual	On-going
B2.2	Household Income and Expenditure Survey (HIES)	Regular Interval	On-going
B2.3	Literacy Assessment Survey	Annual	On-going
B2.4	Labour Force Survey	Quarterly	On-going
B2.5	Survey on Food Security and Nutrition, Disability and Morbidity	Once in 3 Years	Proposed
B2.6	Time Use Survey	Ad-hoc	Proposed
B2.7	Survey on Seed, Feed and Wastage (For Food Balance Sheet)	Ad-hoc	Proposed
B2.8	Survey on Whole sale and Retail Trade	Half decadal	Proposed
B2.9	Survey of Manufacturing Industries	Half decadal	Proposed
B2.10	Land Use Survey	Annual	Proposed
B2.11	Rural Credit Survey	Ad-hoc	On-going
B2.12	Statistics on Government Expenditure for Agriculture and Rural Development (Including Agricultural Subsidy)	Annual	Proposed
B2.13	Statistics on Rural Roads, Highways, Railway, Rural Electrification, Storages Facilities of Agricultural Produces	Ad-hoc	Proposed
B2.14	Irrigation Statistics for Crop Cultivation (Mechanized, Non-mechanized, Surface water and Underground Water)	Ad-hoc	Proposed
B2.15	Fertilizer Statistics (Coverage Type, Quantity, Price, Organic, Inorganic etc.)	Ad-hoc	Proposed
B2.16	Statistics on Use of Pesticides, Insecticides etc.	Ad-hoc	Proposed
B2.17	Statistics on Seeds	Ad-hoc	Proposed

ANNEX-III: LOGICAL FRAMEWORK FOR BANGLADESH SPARS (2016-2030)

Outputs and Strategic Actions (Activities)		Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks	
Strategic Goal 1: Improve competencies of National Statistical System to produce and disseminate core set of ARS in accordance with international standards and best practices							
Output	1.1	Competencies of NSS Strengthened					
Activity	1.1.1	Produce and disseminate reliable and timely agriculture statistics	Reliable and timely Reports published	2018 and onward	BBS, SID	Annual report (AR) DAE, DoF, DLS	Availability of resources
Activity	1.1.2	Use up-to-date methodologies in surveys and censuses	Up-to-date methodologies are used	2018 and onward	BBS, SID	Concerned organizations	Continuation of review process
Activity	1.1.3	Provide guidance to other organizations producing statistics	Optimum coordination among ministries/agencies achieved	2017 and onward	BBS SID	DAE, DoF, DLS, DAM (AR)	BBS is to be capable in providing technical guidance
Activity	1.1.4	Improve professionalism of BBS personnel	BBS performs its job in efficient and effective manner	2017 and onward	BBS SID		Reorganization of BBS & adequate training needed
Activity	1.1.5	Meet the demand of stakeholders properly	Continue consultation with stakeholders	2017 and onward	BBS		Continued data demand assessment needed
Output	1.2	Enhanced use of official statistics in planning /decision making process					
Activity	1.2.1	Involve statisticians in medium/long term planning document of the country	Inclusion of statisticians in preparing policy document	2018 and onward	BBS GED	GED	Coordination between BBS and GED needed
Activity	1.2.2	Ensure enhanced use of official statistics in administrative management	Related government circular issued, evidence based decision making process established	2018 and onward	All ministries and agencies	All ministries and agencies (AR)	Government support in evidence based decision making needed

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	1.2.3	Enhance involvement of statisticians in preparing sector-specific plan	Statisticians assigned in sector specific plan	2018 and onward	BBS and concerned ministries/agencies	Concerned ministries/agencies (AR)	Optimum cooperation between BBS and concerned ministries/agencies needed
Output	1.3	All ARS products follow international standards and quality					
Activity	1.3.1	Review the concepts, definitions adopted in collection of ARS in BBS and aligned ministries/agencies	Review report on each ARS product	2017-18	BBS	BBS and concerned departments	Cooperation among ministries/agencies needed
Activity	1.3.2	Follow the principles of official statistics set by UNSD	Principles of statistics are followed	2018 and onward	BBS SID		All ministries/agencies need to be acquainted with UN principles
Activity	1.3.3	Review statistical process adopted in producing ARS	Review report on each process for ARS product	2017-19	BBS	BBS	Government approval needed
Activity	1.3.4	Assess quality of ARS produced and suggest methods for improvement	Assessment report on the quality of ARS product along with suggested methodology	2017	BBS	BBS SID (AR)	BBS initiative is essential
Output	1.4	National Quality Assurance Framework (NQAF) for ARS Developed					
Activity	1.4.1	Identify international standards and guidelines for each ARS product	Report on each ARS product followed standards	2017	Concerned ministries & BBS	Concerned ministries and BBS	BBS initiative is essential
Activity	1.4.2	Evaluation of existing process for generation of the product in the context of international guidelines	Assessment report on each ARS product	2017	BBS	BBS	BBS initiative is essential

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Output	1.5	Core-set of indicators available according to GSARS					
Activity	1.5.1	Evaluate existing data availability to GSARS	Check list of available data prepared	2018	BBS SID	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies	Continuous effort of BBS & approval of SID needed
Activity	1.5.2	Identify data gap to GSARS	List of new data item prepared	2018	BBS SID	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies (AR)	Continuous effort of BBS is needed
Activity	1.5.3	Conduct new survey and taking proper steps to transform administrative records into official statistics	Reports available	2018 and onward	BBS	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies	Availability of government approval, resource
Output	1.6	Updated methodologies/best practices followed by other countries adopted					
Activity	1.6.1	Adopt updated methodologies/best practices followed by other countries	Updated methodologies/ best practices	2018 And onward	BBS	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies (AR)	Availability of government approval
Activity	1.6.2	Review and improve existing methodology used by BBS in regular interval	Continue evaluation process for improving methodology	2018 And onward	BBS	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies (AR)	Policy decision of SID needed

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	1.6.3	Organize/participate in national/international seminars on methodological issues	Greater number of BBS officials participated	2018 And onward	BBS	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies (AR)	Support of government and UN agencies needed
Activity	1.6.4	Involve academia/ experts in designing and implementing census/surveys	Academia/experts involved in BBS activities	2018 And onward	BBS	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies (AR)	BBS needs to take necessary measures
Strategic Goal 2: Strengthen partnership and coordination among Ministries / Departments and attain harmonized definitions and statistical practices to efficiently produce coherent ARS							
Output	2.1	Efficient production of coherent and consistent agriculture and rural statistics					
Activity	2.1.1	Development of integrated calendar for census and surveys for ARS	Integrated census/survey calendar prepared and published	2017	BBS and other relevant agencies	BBS and other relevant agencies	BBS needs to take necessary steps
Activity	2.1.2	Organize regular training with updated manual for field staff	Manual updated and required training organized	2017 and onward	BBS, DAE, DoF, DLS, DAM	BBS, DAE, DoF DLS, DAM (AR)	Resources availability
Output	2.2	Improved coordination between BBS and other data producing agencies of ARS					
Activity	2.2.1	Setting up coordinating body under the Statistics Act,2013 on all matters relating to Agriculture and Rural Statistics	Form coordinating body with clear terms of reference and membership	2017	BBS		Approval of SID is needed

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	2.2.2	Establish partnership with ministries/ departments and delegation of responsibility relating to production and release of ARS to each concerned ministry/ department	MoU signed with relevant ministries/agencies	2018 and onwards	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies	BBS SID	Good coordination among ministries/agencies needed
Activity	2.2.3	Establish coordination through MoU for defining responsibilities	ToR of different partner agencies prepared and shared	2018 and onward	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies	BBS SID	Good coordination among ministries/agencies needed
Activity	2.2.4	Appoint focal point official of line ministry/department to BBS for coordination	Focal Point Official appointed	2018 and onward	BBS, DAE, DoF DLS, DAM, BFD Other relevant agencies	BBS SID	Initiatives of concerned ministries/agencies needed
Output	2.3	Harmonized concepts and definitions used by all ministries/agencies of ARS					
Activity	2.3.1	Prepare compendium of standard concepts and definitions on ARS	Compendium prepared and published	2017-2018	BBS	BBS and related departments	BBS's initiative needed
Activity	2.3.2	Update concepts and definitions in accordance with the recommendations of international agencies	Review concepts and definitions regularly	2017 and onward	BBS SID	BBS and related departments	BBS's initiative needed
Activity	2.3.3	Conduct review meeting with stakeholder	Meeting conducted with stakeholders	2018 and onward	2017 and onward	BBS, SID and other concerned ministries/ agencies	Approval of SID needed
Output	2.4	More administrative data used as official statistics					

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	2.4.1	Develop new statistical products from administrative system of agriculture related ministries	Methodology developed for the new product and put in practice	2017 and onward	BBS, SID, DAE, DoF, DLS, BFD DAM, Other agencies	MoA, DAE, MoFL, DoF, DLS, DAM, BFD Other relevant agencies	Policy support of government needed
Activity	2.4.2	Collaborate line ministries/agencies to preserve administrative records systematically	Issue government circular for preserving administrative records	2017 and onward	BBS, DAE, DoF DLS, DAM, DF Other relevant agencies	MoA, DAE, MoFL, DoF, DLS, DAM, BFD Other relevant agencies (AR)	Policy support of government needed
Output	2.5	Increased participation of stakeholders for assessing data demand					
Activity	2.5.1	Conduct ad-hock survey on data demand	Ad-hock survey conducted and findings disseminated	2017 and onward	BBS SID	MoA, DAE, MoFL, DoF, DLS, DAM, BFD Other relevant agencies	Government approval needed
Activity	2.5.2	Organize consultation meeting/workshop on use of agricultural and rural statistics	Consultation meeting/workshop organized	2017 and onward	BBS SID	MoA, DAE, MoFL, DoF, DLS, DAM, BFD Other relevant agencies Others	Support of government and international agencies needed
Activity	2.5.3	Assess SDG indicators/other relevant policy documents and determine data gap	Report on assessment of SDG and other documents published	2016 and onward	BBS SID	MoA, DAE, MoFL, DoF, DLS, DAM, BFD Other relevant agencies	Government effort needed

Strategic Goal 3: Strengthen capacity to adopt cost effective and scientific survey methodology using sampling frame based on Censuses

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Output	3.1	Structural data on crops, livestock and fisheries are available generated from related censuses					
Activity	3.1.1	Conduct Agricultural Census covering crops, fisheries and livestock sub-sectors	Agriculture Census results disseminated	2017-2021	BBS SID	BBS, SID, MoA MoFL, DAE DOF, DLS	Government approval and resource needed
Output	3.2	Sampling Frames using census data base for annual survey on production of crop, fisheries and livestock developed					
Activity	3.2.1	Develop Sampling Frames to meet requirement of crop, livestock, fishery and forestry surveys	Survey carried out annually and results disseminated	2018 and onward	BBS, SID DOF	BBS, SID, MoA MoFL, DAE DoF, DLS (AR)	Government approval and resource needed
Activity	3.2.2	Establishing a Census/Survey Methodology Wing in BBS	Methodology Wing established	2019 and onward	BBS SID		Better coordination among agencies needed
Output	3.3	Census and Survey Calendar related to ARS followed					
Activity	3.3.1	Conduct census/survey following the calendar	Census/ survey conducted as per Calendar	2017 and onward	BBS, DoF BFD, DAM	DAE DLS	Government approval and resource needed
Activity	3.3.2	Develop methodology and generate data on good agricultural practices	Agriculture census reports, Administrative report	2017-2018	BBS, DAE, DoF and DLS	DAE, DoF and DLS	Resources are available
Output	3.4	Annual Crop production survey conducted using improved methodology					
Activity	3.4.1	Design and prepare sampling frame and conduct annual crop production	Sampling frame prepared and annual crop production survey conducted	2018 and onward	BBS SID	DAE SPARRSO	Availability of resources

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Outputs and Strategic Actions (Activities)		Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
		survey				
Output	3.5	Annual fish production survey conducted using improved methodology				
Activity	3.5.1	Design and prepare sampling frame and conduct annual fish production survey (inland)	Sampling frame prepared and annual fish production survey conducted	2018 and onward	BBS, DoF SID MoFL	Availability of resources
Activity	3.5.2	Generate annual production of marine fish	Annual marine fish production data generated	2018 and onward	DoF MoFL	Availability of resources
Output	3.6	Annual livestock production survey conducted using improved methodology				
Activity	3.6.1	Design integrated sampling frame for livestock and conduct annual survey	Survey carried out annually and results disseminated	2018 and onward	BBS DLS	Availability of resources
Output	3.7	Annual survey on input cost of Crops, fisheries and livestock and their value chains conducted using improved methodology				
Activity	3.7.1	Design and conduct annual input cost survey for major cereals and other crops	Survey carried out annually and results disseminated	2019 and onward	BBS SID	MoA Availability of resources
Activity	3.7.2	Design and conduct input cost survey for production of fish on regular interval	Survey carried out once in 5 year and results disseminated	2019 and onward	DoF MoFL BBS	Availability of resources
Activity	3.7.3	Design and conduct input cost survey for livestock production on regular interval	Survey carried out once in 5 year and results disseminated	2019 and onward	BBS	DLS MoFL (AR) Availability of resources
Activity	3.7.4	Design and conduct survey on supply chain and value chain of crops, fisheries and livestock production	Survey carried out once in 5 year and results disseminated	2019 and onward	BBS	DAM (AR) Availability of resources

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	3.7.5	Conduct Livestock Resources Survey	Survey carried out once in 5 year and results disseminated	2019 and onward	BBS, DLS	DLS	Availability of resources
Output	3.8	Annual Food Balance Sheet (FBS) prepared					
Activity	3.8.1	Prepare Food Balance Sheet (FBS) annually	Food Balance Sheet published	2017 and onward	BBS	DoF, BB, EPB, FAO others	Availability of resources
Output	3.9	Survey on private food grain stock (supply and value chains) conducted					
Activity	3.9.1	Conduct annual/ad-hock survey on Private Stock of Food Grain survey on supply and value chain	Survey on private stock of food grain supply and value chain conducted	2017 2019	BBS	FPMU MoF DAM (AR)	Availability of resources
Output	3.10	Survey of irrigation system conducted					
Activity	3.10.1	Develop survey guidelines and conduct survey on irrigation	Survey conducted on Irrigation/administrative data compiled	2017 and onward	BBS	DAE (AR)	Resources are available
Output	3.11	Survey on land use conducted					
Activity	3.11.1	Revisit the land use classifications and compile land use statistics	Survey conducted on land use/ Administrative data compiled	2018 and onward	BBS	DLR (AR)	Continuous effort of BBS needed
Output	3.12	Survey on forest product conducted					
Activity	3.12.1	Conduct survey on forest products	Carry out survey on inventory of forests once in ten years	2018 and onward	BFD BBS		Resources are available
Output	3.13	New databases to measure Natural Resources (Land, Water and Air)					

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
		changes developed					
Activity	3.13.1	Conduct survey on soil degradation, water pollution, air pollution and emission in the environment due to agriculture	Related survey conducted and data released	2018 and onward	SRDI, MOA DoE, MOEF MODMR		Resources are available
Strategic Goal 4: Develop a comprehensive human resources and capacity building mechanism with corresponding organizational setup							
Output	4.1	Qualified personnel in BBS and other ministries/departments having statistics background available					
Activity	4.1.1	Increase the number of statistics graduate in recruiting statistics officer in BBS	More statistics graduates recruited as statistics officer/statistician	2018 and onward	BBS, SID MOP, MOPA MOF		Government approval and resources needed
Activity	4.1.2	Advocate the necessity of creating the post of statistics officer in planning wing of all ministries/agencies	Advocacy meeting organized and communication continues	2018 and onward	BBS, SID MOPA, All other ministries agencies		Government approval needed
Output	4.2	Statistical cells in each ministries/department related with ARS established					
Activity	4.2.1	Setting up of statistical cells in each ministries and reorganization of agriculture statistics wing in BBS	Statistics cells created with necessary trained personnel; Agriculture Wing of BBS reorganized	2018 and onward	Concerned Ministries BBS, SID MOPA		Government approval needed

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Outputs and Strategic Actions (Activities)		Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	4.2.2	Placing the issue to competent authority and execute	Recommendation placed to competent authority	2018 and onward	BBS SID	Continuous effort of BBS and SID needed
Output	4.3	Training facility created with agriculture statistics in the faculty				
Activity	4.3.1	Establishing Statistics Training Academy	Statistics Training Academy established	2018 and onward	BBS, SID MOP, MOF	BAU ISRT Government approval and resources needed
Activity	4.3.2	Creation of Faculty of Agriculture Statistics in Training Academy with research cell	Faculty of Agriculture statistics created in Training Academy	2018 and onward	BBS, SID, MOP MOF	BAU ISRT Government approval and resources needed
Activity	4.3.3	Establish coordination between Statistics Training Academy and Agriculture University and ISRT	MoU signed between BBS and Agriculture University and ISRT	2018 to 2020	BBS, BAU ISRT, SID	Government approval needed
Output	4.4	Training to the personnel involved in agriculture statistics provided				
Activity	4.4.1	Keep provision for training on agriculture statistics in the training plan	Training plan on agriculture statistics prepared	2018 and onward	BBS SID	ISRT Availability of resources
Activity	4.4.2	Prepare training plan and update every year	Training plan updated	2018 and onward	BBS SID	Continuous effort of BBS needed
Activity	4.4.3	Prepare training course module and curricula	Training modules prepared	2018 and onward	BBS, SID	ISRT Continuous effort of BBS needed
Activity	4.4.4	Implement training plans	Necessary training conducted	2018 and onward	BBS, SID DOF	Availability of resources
Activity	4.4.5	Strengthen capacity to produce agriculture statistics	Refreshers training organized for field staff	2017 and onward	BBS SID	DAE, DOF DLS Availability of resources
Output	4.5	Statistics Wing under BBS Reorganized				

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Activity	4.5.1	Review of strength of staff in agriculture wing of BBS in the context of ARS	Number of existing staff of BBS increased	2017-22	BBS SID MoP		Continuous effort of BBS needed
Activity	4.5.2	Identification of shortages with specific nature of jobs	Number of specialized / expert personnel	2017-22	BBS	BBS	Continuous effort of BBS needed
Activity	4.5.3	Creation of two wings in BBS for agricultural statistics	Two wings created: Agriculture Statistics (Crops and land use) Wing and Agriculture Statistics (Fisheries, Livestock and Others) Wing	2017-2019	BBS, SID MoPA, MOP MOF		Government approval needed
Activity	4.5.4	Approval for creation of posts	New posts created and approved	2017-2018	BBS, SID, MOP MoPA, MOF		Government approval needed
Activity	4.5.5	Filling of posts	Recruitment process completed	2018-2019	BBS, SID MOP, MOPA		Government approval needed
Output	4.6	Agriculture Price data system of DAM strengthened					
Activity	4.6.1	Expand the organizational structure of DAM	Reorganization of DAM completed	2018-2020	DAM, MoA MOPA		Government approval needed
Activity	4.6.2	Improve data collection methodology with support of BBS	Improved methodology developed and used	2017 and onward	DAM BBS		Good coordination needed
Activity	4.6.3	Conduct ad-hock survey by DAM for price data collection	Necessary survey conducted and data disseminated	2017 and onward	DAM	BBS	Resources are available

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Output	4.7	Spatial data analysis unit in Agriculture Wing of BBS created					
Activity	4.7.1	Creation of remote sensing unit in proposed Agriculture Economics (Crops and land use) Wing	Remote Sensing Unit created in Agriculture Wing of BBS	2017-2020	BBS SID		Government approval needed
Activity	4.7.2	Generate RS based crop statistics for prominent crops	Area statistics on the basis of RS technique generated	2017-2020	BBS SID		Government approval needed
Strategic Goal 5: Improve ICT infrastructure and its applications for collection, compilation and dissemination of ARS and establish Integrated Data Management and dissemination system							
Output	5.1	Statistical products generated using ICT tools					
Activity	5.1.1	Use of GIS / Remote Sensing and other ICT applications for collection of agriculture related statistics	Data collected and compiled using ICT and GIS technology	2017-22	BBS	DAE SPARRSO	Availability of resources
Output	5.2	Infrastructure for handling GIS and Remote Sensing data developed					
Activity	5.2.1	Develop required infrastructure	Hardware and software for GIS and Remote sensing procured and installed	2017-20	BBS SID	SPARRSO	Availability of resources
Activity	5.2.2	Human capacity building for use of GIS and Remote sensing	Training provided to the personnel deployed for the purpose	2017-20	BBS	DAE SPARRSO	
Activity	5.2.3	Develop integrated data management system	Established data collection and processing facility using ICT for timely dissemination	2017-22	BBS SID	DAE, DAM, BMD, SPARRSO, FPMU, MoA	Government approval and resources needed

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Outputs and Strategic Actions (Activities)			Objectively Verifiable Indicators	Target Year	Implementing Agency/ Ministry	Means of Verification/ Source of data	Assumptions and risks
Output	5.3	Meta data on each AR statistical product available					
Activity	5.3.1	Prepare of meta data of each AR statistical product	Assign responsibility of Meta data Management to each agency based on the activity involved	2017 and onward	BBS SID	DAE, DOF, DLS DAM, LGED Other relevant ministries/agencies	Government approval and resources needed
Output	5.4	Visibility of AR statistical product in public domain improved					
Activity	5.4.1	Improve user participation in AR statistics usage, identification of new data needs and further action	Data dissemination mechanism improves, data demand assessed	2017 and onward	BBS SID	DAE, DOF, DLS DAM, LGED Other relevant ministries/agencies	Continuous effort of BBS needed
Activity	5.4.2	Organise of Agriculture and Rural data users' workshops	Number of workshops organized	2017 and onward	BBS SID	DAE, DOF, DLS DAM, LGED Other relevant	Availability of resources
Activity	5.4.3	Establish a modality to measure user satisfaction	Well organized feedback forum formed	2018 and onward	BBS SID	Concerned ministries and departments	Continuous effort of BBS needed
Output	5.5	Data sharing protocols developed					
Activity	5.5.1	Disseminate data in common management	Signing MoU among data producers	2017 and onward	BBS SID		Government policies and initiative needed
Activity	5.5.2	Prepare Rules and regulations of data sharing	Rules and regulations finalized and circulated	2017 and onward	BBS SID		Government approval needed
Output	5.6	Integrated data dissemination platform established					
Activity	5.6.1	Create central data hub with BBS's coordination	Assess data demand and arrange to supply as continuous process	2017 and onward	BBS SID	Concerned ministries/agencies	Government approval, good coordination and resources needed