



Ministry of Food and Agriculture

Policy Planning, Monitoring and Evaluation Directorate

AGRICULTURE SECTOR MONITORING AND EVALUATION PLAN

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## ACRONYMS

ADB	Agricultural Development Bank
AEAs	Agriculture Extension Agents
AESD	Agriculture Engineering Services Directorate
AgDPL	Agriculture Development Policy lending
AgSSIP	Agricultural Service Sub-sector Investment Program
APD	Animal Production Directorate
APR	Annual Progress Report
CAADP	Comprehensive Africa Agriculture Development Programme
CEPA	Center for Policy Analysis
CIDA	Canadian International Development Agency
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organization
DADU	District Agriculture Development Unit
DAES	Directorate of Agricultural Extension Services
DCS	Directorate of Crops Services
DDA	District Director of Agriculture
DDO	District Development Officer
DMISO	District MIS officer
DOF	Directorate of Fisheries
DP	Development Partner
DPCU	District Planning Coordination Unit
EU	European Union
EWB	Engineers without Borders
FABS	Food and Agricultural Budgetary Support
FAO	Food and Agriculture Organization of the United Nations
FASDEP	Food and Agriculture Sector Development Policy
FBO	Farmer Based Organization
GDHS	Ghana Demographic and Health Services
GDP	Gross Domestic Product
GIDA	Ghana Irrigation Development Authority
GLDB	Grains and Legumes Development Board
GLSS	Ghana Living Standard Survey
GoG	Government of Ghana
GPRS	Growth and Poverty Reduction Strategy
LPIU	Livestock Planning and Information Unit
MCA	Millennium Challenge Account
MDAs	Ministries, Departments and Agencies
MDBS	Multi Donor Budget Support
MDGs	Millennium Development Goals
MEC	Monitoring, Evaluation and Coordination
MLGRD	Ministry of Local Government and Rural Development
M&E	Monitoring and Evaluation
MOFA	Ministry of Food and Agriculture

MTEF	Medium Term Expenditure Framework
NDPC	National Development Planning Commission
PPMED	Policy Planning Monitoring and Evaluation Directorate
PPRSD	Plant Protection and Regulatory Service Directorate
PPP	Policies, Programmes, Projects
PSI	President Special Initiatives
PSIA	Poverty and Social Impact Assessment
RADU	Regional Agriculture Development Unit
RBME	Results-based Monitoring and Evaluation System
RDA	Regional Director of Agriculture
SAPR	Sector Annual Progress Report
SMTDP	Sector Medium-Term Development Plan
SPSS:	Analytical software
SRID	Statistic Research and Information Directorate
SWAP	Sector Wide Approach
VSD	Veterinary Services Directorate
WIAD	Women in Agricultural Development
WB	World Bank

# AGRICULTURE SECTOR MONITORING AND EVALUATION (M&E) PLAN

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Goal and Objective of SMTDP

Agriculture has been the king-pin in Ghana's economic development and has been recognised as such in previous development plans and the poverty reduction strategy papers since 2002. In the Ghana Poverty Reduction Strategy (GPRS I) (2003-2005), agriculture was to be modernised to spur rural development. Similarly in the Growth and Poverty Reduction Strategy (GPRS II) (2006-2009), agriculture was expected to lead the growth and structural transformation of the economy and maximize the benefits of accelerated growth. GRPS II recognizes that no significant progress can be made in raising the average real incomes of Ghanaians as a whole without significant improvements in the productivity of the agricultural sector and agro-based/processing industry (NDPC, 2005). The Ministry of Food and Agriculture (MOFA) as the lead ministry responsible for policy and planning for the agriculture sector has always responded to the national development initiatives with policies and strategies that address the national goals.

In 2007, MOFA completed the revision of its Food and Agriculture Sector Development Policy (FASDEP). As the policy itself is a statement of intent, the next step towards the realisation of the policy objectives is the development of a sector plan for the implementation of the broad strategies specified in the policy.

According to the FASDEP II document, the "vision for the food and agriculture sector is linked to the national vision in GPRS II, NEPAD's CAADP and the MDGs" (MOFA, 2007 p.15). Both the National Development Plan (being prepared by the NDPC) and the Comprehensive African Agricultural Development Programme (CAADP) framework have targets for agriculture sector performance that will contribute to the attainment of the broader goals. The National Development Plan expects agriculture to spur industrial growth. Also, in the National Development Plan, the economy is expected to grow at 8% by 2009 and 10% by 2015. This level of growth demands higher growth performance than the average of 5.6% recorded over the 2000-2006. Agriculture growth target under CAADP is at least 6%. This is to be achieved by raising allocation of government expenditure to agriculture to at least 10%.

The ECOWAS Agricultural Policy (ECOWAP) and the CAADP of NEPAD are key efforts with the overriding goal of helping African countries increase their economic growth through agriculture-based development, which eradicates hunger, reduces poverty and food and nutrition insecurity and makes it possible to increase exports. This goal is in close harmony with Ghana's National Development Plan, GPRS, and the FASDEP.

The METASIP is a sector wide investment plan and includes activities of agriculture related Ministries, Departments and Agencies (MDAs) based on the classification of functions for the sector. It also anticipates activities of sector stakeholders in effective coordination and participation. The plan development process incorporates systematic stocktaking of past and current agriculture development efforts and analysis of future prospects for accelerating growth in the sector, reducing poverty and improving food and nutrition security. Extensive consultations with all stakeholders were undertaken at central and decentralized levels for the preparation of the investment plan.

## **1.2 Purpose of the M&E Plan**

Monitoring and evaluation of the performance of sector public programmes and institutions helps increase their effectiveness and provides increased accountability and transparency during programme implementation. With respect to this Agriculture Sector Plan, there is need to provide adequate, accurate and timely information on activities by all the different stakeholders to ensure that Plan implementation achieves the desired objectives and/or that changes are made on time to ensure that the desired objectives are pursued.

The overall goal of the sector M&E system is to facilitate the tracking of progress and effectiveness of service delivery, as well as identify implementation challenges associated with the sector plan.

Specifically, the objectives are;

- a. To enhance institutional arrangement with adequate capacity to support effective monitoring and evaluation of the plan.
- b. To strengthen and effectively coordinate the current system for monitoring and evaluating the effectiveness of the sector service delivery.
- c. To evolve an effective system for collecting reliable, relevant and timely data for information generating information for planning and budgeting.
- d. To manage an effective feedback system that makes information available in usable systems.
- e. To improve coordination of all stakeholders including private sector in the plan implementation.
- f. To design a holistic approach to M&E this, captures all stakeholders including the private sector.

The sustainability of M&E as management tool to influence planning depends on resources (human, financial, logistic), human capacities, M&E guidance and management skills, and cost effectiveness. The principal actors in the sector M&E are usually the partners actively involved in the sector, from farm communities to policy makers and to donor community. Feedback and communication of M&E results and lessons learnt are key M&E tools to keep the interest of the partners in the M&E process, and to sustain their active participation. In a decentralized and coordinated M&E, feedback should take place horizontally and vertically down to the farmer communities. Lessons learnt should be incorporated to improve the subsequent development planning exercises. Lessons learnt can influence policy, development strategies, service delivery mechanisms, coordination of actions with other sectors, etc.

## **1.3 Implementation Status of the SMTDP**

The Medium Term Agricultural Sector Investment Plan (METASIP) is planned for 2011 to 2015. The Plan is being factored into the MTEF preparation process for the 2011 physical year.

## CHAPTER TWO

### 2.0 M&E ACTIVITIES

#### 2.1 Stakeholder Analysis

Stakeholder	Information Needs/Responsibilities
Ministry of Finance and Economic Planning Ghana Statistical Service	Receipt of data on agricultural production for the calculation of agricultural growth rates and contribution to GDP
Ministry of Trade and Industry	Ready to complement efforts to ensure value addition of agricultural produce
Ministry of Roads and Highways	Ready to complement MOFA's efforts through provision of need roads to link producing centres with markets to reduce post harvest losses
Ministry of Local Government and Rural Development	Agreement to liaise with the district assemblies through provision of public utilities to agricultural communities to stem the rural-urban drift
Ghana Meteorological Agency	Provision of accurate weather forecast information to assist farmers plan their cropping calendar
Ministry of Lands and Forestry	To partner MOFA to make available tracts of land through the land banks for lease to investors
Ghana Customs, Excise and Preventive Service	To check the smuggling of subsidized agricultural inputs across the borders
Development Partners	To provide the needed financial resources and ensure in use of funds
Traditional Authorities	To release lands for farming by the youth
Media	To provide the needed publicity and education on MOFA programmes to the general public
Research Institutions	To develop improved and appropriate technologies to help increase labour and land productivity
Universities – Faculties of Agriculture	To research into policy for evidence-based decision making
Parliament / Members of Parliament	To approve appropriation and loans for agricultural development and brief constituents on agricultural policies and programmes
Attorney-General's Department	To assist in the revision of outdated laws and legislative instruments militating agricultural development
Ghana Police Service	To support in the prosecution of citizens that infringe upon laws and regulation pertaining to agricultural development

Stakeholder	Information Needs/Responsibilities
District Assemblies / Assembly Members	To assist in the provision of needed infrastructure for agricultural development

## 2.2 M&E Conditions and Capacities

The monitoring and evaluation system of MOFA is progressively institutionalized and operated in a decentralized and participatory manner. Regular data collection is implemented at the district level through District Agricultural Development Units (DADU) offices, under the technical guidance and backstopping of SRID and technical directorates. In each district, Special Duty Extension Officers, specialized AEAs (livestock, perennial crops, etc.), and sometimes zonal officers and other AEAs, are collecting a series of data that are reported on monthly, quarterly, seasonal or annual basis depending on the data. Some data are reported within decentralized MOFA system, while others are reported to agricultural programmes and projects. Within decentralized MOFA, data are consolidated and sometimes analysed by the district MIS officer (DMISO), and submitted to the DDA for review. The DDA sends the district report through the Regional Director of Agriculture to the Regional M&E officer at RADU. The Regional M&E officer consolidates all district reports into a regional report, incorporating data from decentralized directorates, special studies and sometimes agriculture projects and programmes. This report is sent quarterly and annually through the RDA to Chief Director of MOFA and Director, PPMED.

At the regional level, PPMED prepares the overall MOFA report by gathering reports from each region and from each directorate, agriculture related boards and authorities, and by incorporating data from agricultural project and programme reports and from special studies. MOFA report is then validated by the Chief Director and distributed within decentralized MOFA, and sent to Development Partners involved in Multi-Donors Budget Support. The report is also sent to other users and contributors on request.

The M&E process and steps from data collection to feedback is not always standardized. At the district level, there are sometimes several data collection formats in use, making comparison difficult between districts. Furthermore, several DADUs have to adjust the planned M&E activities based on available financial, human and logistic resources. For example, limited resources impact negatively on sampling criteria of rural communities monitored (small number of communities covered, usually the most easily accessible), on number of field visits, and on data control and cleaning. Consequently, data collected are not always representative of the area, quality of data collected is sometimes questionable, and method of data collection is not always participatory. Due to lack of time and mobility, only few data are controlled and cleaned before reporting at the district level. There is then some temptation to “cook” the data to present a situation more in line with the results planned than the results achieved in reality.

Most of the disaggregation of data is based on administrative boundary (region and district) and commodity. However, only few of them have gender dimension, and none of them have poverty/wealth group, ecological zone and rural/urban dimensions, making difficult the monitoring of interest, responsive capacity, participation and distribution of benefit by target group and by livelihood-farming system. It is therefore difficult from the current M&E system to measure the sector contribution to GPRSII objectives and to identify targeted agricultural options.

The preliminary analysis of the M&E process in MOFA<sup>1</sup> showed the following main strengths and bottlenecks.

Table 1: Strengths and bottleneck in the M&E process of MOFA

Strengths	Bottlenecks
M&E system in place and operational from district to central level	Poor awareness of FASDEP and National Development planning documents and implication for M&E at the district level.
Interest of several actors in M&E improvement at the central level	Poor awareness of the M&E objective in the context of FASDEP and National Development Plans at all levels.
DMISO and RMISO are at post	Poor communication on M&E.
Special duty AEAS have been selected and trained for data collection (crop, field, yield, price)	Poor data quality, especially concerning livestock sub-sector and production loss (harvest and post harvest).
Timely reporting	Poor data analysis and interpretation, making M&E not very useful for policy makers and strategic planning. (linked to poor rural diagnosis and analytical skills/ experience at the district level, making data interpretation difficult at RADU and central level).
Training of AEA in basic data collection	Limited M&E of outcome and impact indicators measuring sector performance contribution to FASDEP objectives: food security, agriculture employment, poverty reduction.
Participatory and bottom up M&E process in progress	Poor integration of data collected to interpret capital and labor productivity and agriculture growth
Use of AEAs by projects and NGOs for M&E purposes.	Non harmonized data collection format and data collection method (except for SRID data)
	M&E attitude and practices using old sub-sector data collection instruments and methods, not adapted to the new M&E requirements.
	Limited reporting skills at all levels
	Limited resources and incentive for mobility, limiting scope and coverage of primary data collection
	Poor coordination of M&E at all levels
	Limited dissemination of quarterly and annual M&E report and poor visibility of PPMED among DADU and DPs.
	No or poor feedback from central to DADU and community level
	Unbalanced gender data collectors (less than 10% female)

<sup>1</sup> Central, regional and district M&E situation and needs assessment study – August – October 2006 (PPMED, LPIU, SRID).

Seven major bottlenecks in the MOFA M&E process have been identified.

1. Poor understanding and awareness of M&E objectives and dimensions in the context of FASDEP and national frameworks;
1. Poor awareness of FASDEP and national objectives and targets, and implication for data collection;
2. M&E attitude and practices using old sub-sector data collection instruments and methods, not adapted to the new M&E requirement;
3. Poor mobility and incentive for data collectors limiting scope and coverage of data collection;
4. Poor analytical and reporting skills of M&E officers at the district, regional and central levels;
5. Poor synergies and complementarities between sources of data and monitoring sources (regular monitoring, programmes, projects, special studies, university work, census, etc.);
6. Poor M&E report dissemination and PPMED visibility;
7. Poor feedback system, especially from central to region, district and community.

Several urgent and simultaneous actions are required to rectify those seven major gaps towards improved quality of analysis and reporting, sustained interest, and improved time and cost effectiveness in M&E. Several other identified weaknesses are consequences of those major gaps and will be rectified during the improved M&E process. Other gaps will require institutional and political will such as better gender balance, appropriate number of special duty AEAs.

### **2.3 Indicators and Targets**

The M&E Plan targets to keep track of indicators covering the six programme areas of the sector plan and by extension the six policy objective so of the Food and Agriculture Sector Policy (FASDEP). In addition, it intends to keep track of progress towards the achievement of the Millennium Development Goals. It must be emphasized that data for the tracking of all the indicators will not be generated by the Ministry alone. Other partner MDAs will be consulted in the provision of the information. The indicators are basically results, outcome and impact ones.

## 2.4 Agriculture Sector M&E Matrix

<b>MDG objectives</b>	<b>Reduce by half the proportion of population suffering of hunger by 2015</b> <b>Integrate the principles of sustainable development in the national policies and reverse the current trend of natural resources degradation.</b>
<b>CAADP Objective</b>	Improve agricultural productivity to attain an annual growth rate of 6%, with particular attention to small scale farmers, especially focusing on women. This would be done through the following pillars: <ul style="list-style-type: none"> <li>a. Land and Water Management</li> <li>b. Rural Infrastructure and Trade-related Capacities for Improved Market access</li> <li>c. Increasing Food Supply and Reducing Hunger</li> <li>d. Agricultural Research, Technology Dissemination and Adoption</li> <li>e. Sustainable development of livestock, fisheries and forestry resources</li> </ul>
<b>National Economic Development Objectives</b>	To foster high and equitable levels of growth such as to make Ghana a middle-income by year 2020, characterized by a high degree of international competitiveness, ample employment for Ghanaians, especially the youth, improved delivery of essential social services, such as affordable housing, education and health, a vibrant private sector as well an effective and efficient public sector capable of delivering essential services to the private sector to improve its standing in the world economy.
<b>Vision of the Agricultural Sector</b>	A modernized agriculture culminating in a structurally transformed economy and evident in food security, employment opportunities and reduced poverty.
<b>FASDEP II Sector objectives</b>	<ol style="list-style-type: none"> <li>1. Food security and emergency preparedness.</li> <li>2. Improved growth in incomes and reduced income variability</li> <li>3. Increased competitiveness and enhanced integration into domestic and international markets</li> <li>4. Sustainable management of land and environment.</li> <li>5. Science and technology applied in food and agriculture development.</li> <li>6. Improved institutional coordination</li> </ol>

**Objective 1: Food security and emergency preparedness.**

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
1	Number of improved technologies released	A4.1.1	Record data from CSIR and DCS (NVRC).	Improved availability and access of improved technologies	CSIR, DCS (NVRC), Agric. Projects	Annually	- National - Regional	DCS	Increased productivity
2	Number and type of major improved technologies demonstrated to farmers.	A4.1.1	Record data from DADU and directorates.  2009 to 2015: number and type of improved technologies demonstrated.  2009: Baseline study report on adoption rate, including strategic recommendations to increase adoption rate.	Improve uptake of technologies by improving their relevance and access.	- CSIR, (RELC Desk) - DADU - RADU - MiDA - NGO's - Agric. Projects	- Monthly - Quarterly - Annually for demonstrations. - Every 3yrs for adoption	- National - Regional -District - Gender - technology	DAES	Increased productivity

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
3	Cumulative number of farmers benefiting from technology demonstrations.	Nil	Record data from DADU and directorates.  2009 to 2015: Nature of improved technologies demonstrated and participation	High priority given to applied research with more emphasis devoted to developing the commodity value chain.	- DADUs - RADUs - DAES - Surveys.	- Monthly, - Quarterly, - Annually	- National - Regional - District - Gender - technology	DAES	Increased productivity

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
4	<p>Adoption rates of new agricultural technologies and good agricultural practices (GAPS) in commodities :</p> <ul style="list-style-type: none"> <li>• Maize, Rice, Sorghum, Cassava, Yam and fish increased by 50%),</li> <li>• fish and livestock farming. increased by 50%, and 25% respectively</li> <li>• Total land area under improved technologies</li> </ul>	A4.2.1 A4. 2. 2 A4. 2 .3	<p>- From 2009 to 2015, record number and type of new technologies and good agriculture practices (along the commodity value chain) introduced by AEAs by region.</p> <p>- Record number and gender of participants per technology.</p> <p>- Estimate adoption rates among categories of participants.</p> <p>-</p>	Stimulate, support and facilitate adaptation and widespread adoption of farming, processing and sustainable land use practices.	<p>-DADU</p> <p>- RADU</p> <p>- APD, VSD</p> <p>- LWMU of CSD.</p> <p>- DAES</p> <p>- MLF</p> <p>-Agric. Projects</p>	Annual	<p>- National</p> <p>- Regional</p> <p>- District</p> <p>- Gender</p> <p>- technology</p>	DAES	Increased productivity

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
5	Percentage increases in yield of selected fish, crops and livestock increased by 50%, 50% and 25% respectively.	A5.1.3	<ul style="list-style-type: none"> <li>- 2009-2015: yield measurement of selected commodities</li> <li>crop productivity (mention selected commodities)</li> <li>- fish productivity</li> <li>- Livestock productivity: changes in poultry, sheep, goat, pig, cattle productivity.</li> </ul>	<ul style="list-style-type: none"> <li>- Lower general earnings in the agricultural sector in comparison to other sectors.</li> <li>- Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.</li> </ul>	<ul style="list-style-type: none"> <li>- SRID, APD, VSD</li> <li>- RADU, DADU, MOAP , DoF, Agric. Projects</li> </ul>	Annual	<ul style="list-style-type: none"> <li>- National</li> <li>- Regional</li> <li>- District</li> <li>- Gender</li> </ul>	SRID	<ul style="list-style-type: none"> <li>- Agricultural intensification</li> <li>- Commercialization of agriculture.</li> </ul>
6	Per capita production and consumption of key staple foods (crops, livestock and fish) in kg/annum and live animal/annum.	A5.2.1	<ul style="list-style-type: none"> <li>- Per capita production and consumption calculated from annual area, yield and production measurement for selected commodities.</li> </ul>	<ul style="list-style-type: none"> <li>Focus at the national and agro-ecological levels on development of the selected commodities.</li> </ul>	<ul style="list-style-type: none"> <li>- SRID, Fisheries, APD/VSD</li> <li>- Research - Institutions,</li> </ul>	- Annual	<ul style="list-style-type: none"> <li>- National</li> <li>- Regional</li> <li>- District</li> <li>- Gender</li> </ul>	SRID	<ul style="list-style-type: none"> <li>- Food security</li> <li>- Decreased poverty/ and vulnerability</li> </ul>

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
7	Percentage of children stunted and underweight.	A7.2.1	<ul style="list-style-type: none"> <li>- Child malnutrition (Underweight and Vitamin. A deficiency) issued from MoH every three years.</li> <li>- Special studies for the 3 Northern Regions every 3 years.</li> <li>- Annual sampling of clinics/hospitals</li> </ul>	<p>Enhanced nutrition through coordination of programmes and institutions for food security</p> <p>Dissemination of nutrition and health information, and advocacy for food fortification.</p>	<ul style="list-style-type: none"> <li>- MOH</li> <li>- District Health Statistics</li> </ul>	<p>3 years</p> <p>Annually</p>	<ul style="list-style-type: none"> <li>- National</li> <li>- Regional</li> <li>- District</li> <li>- Gender</li> </ul>	MOH GDHS	<ul style="list-style-type: none"> <li>- Increased food security</li> <li>- Improved child nutrition</li> </ul>
8	<p>Poverty incidence ratio (P1)</p> <p>Poverty gap ratio (P2)</p> <p>Share of poorest quintile in national income (P3)</p>	A7.1.1 A7.1.2 A7.1.3	<ul style="list-style-type: none"> <li>- Using the 2008 Comprehensive livelihood study as a base, determine proportional change of Farm-based livelihoods, Agric non-farm based livelihoods, non agric livelihoods and natural resource based livelihoods.</li> <li>- Comprehensive review of main livelihood groups every three years.</li> </ul>	<p>Lower general earnings in the agricultural sector in comparison to other sectors.</p> <p>Support value chain links based on comparative advantage and assessed needs.</p> <p>- Promote formation of viable farmer groups and FBOs.</p>	<ul style="list-style-type: none"> <li>- NDPC (PSIA)</li> <li>- WFP</li> <li>- PPMED</li> </ul>	<p>2 years</p> <p>5 years (GLSS)</p>	<ul style="list-style-type: none"> <li>- National</li> <li>- Regional</li> </ul>	PPMED	<ul style="list-style-type: none"> <li>- Poverty reduction</li> <li>- Increased incomes</li> </ul>

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
9a	Percent post harvest losses in maize, rice, sorghum, cassava, yam and fish	A4.6.1	<ul style="list-style-type: none"> <li>- Special study to update database on post-harvest losses along the value chain.</li> <li>- 2009-2015: number of initiatives implemented to reduce loss based on findings of the study and subsequent monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop effective post-harvest management strategies, particularly storage facilities at individual and community levels.</li> </ul>	<ul style="list-style-type: none"> <li>- Post harvest unit of AESD</li> </ul>	Every 2 years	<ul style="list-style-type: none"> <li>- National</li> <li>- District</li> <li>- Crop</li> <li>- Category of loss along the value chain</li> <li>- Gender</li> </ul>	AESD	<ul style="list-style-type: none"> <li>- Reduced post harvest losses.</li> </ul>
9b	Type, number and capacity of agro-processing /storage facilities available at household level		<ul style="list-style-type: none"> <li>- Inventory of available facilities by type, location and ownership</li> </ul>	<ul style="list-style-type: none"> <li>- Geographic distribution and adequacy of processing and storage facilities</li> </ul>	<ul style="list-style-type: none"> <li>- Post Harvest Unit of AESD</li> <li>DADU,</li> <li>RADU</li> </ul>	Annually	<ul style="list-style-type: none"> <li>- District</li> <li>- Regional</li> <li>- National</li> </ul>	AESD	<ul style="list-style-type: none"> <li>- Reduced post-harvest losses,</li> <li>- Private sector participation</li> </ul>
9c	Type, number and capacity of storage facilities available-not at household level.	A4.8.2 Capacity utilization of food reserve	<ul style="list-style-type: none"> <li>- Take inventory of number, type and capacity of buffer stock facilities</li> </ul>	<ul style="list-style-type: none"> <li>- Geographic Distribution and Adequacy of buffer stock facilities</li> </ul>	<ul style="list-style-type: none"> <li>- Post Harvest Unit of AESD</li> </ul>	Annually	<ul style="list-style-type: none"> <li>-District,</li> <li>-Region,</li> <li>-National</li> </ul>	AESD	<ul style="list-style-type: none"> <li>-Improved food security</li> </ul>

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
10	Level of poverty based on food security/insecurity.	A8.2.4	<ul style="list-style-type: none"> <li>- Estimate percentage of vulnerable, poor, medium and well-off, based on beneficiary assessment including assets, vulnerabilities, change of attitude and behavior, responsive capacities, pro-poor delivery mechanisms.</li> <li>- Establish sector outcome and impact and define targets for poverty reduction, including pro-poor delivery mechanisms.</li> <li>- Level of poverty based on calorie consumption</li> </ul>	- Special programmes targeted to poor and vulnerable.	<ul style="list-style-type: none"> <li>- GSS (GLSS), - NDPC (PSIA)</li> <li>- PPMED</li> <li>- SRID</li> </ul>	2 years	District, social group, gender, urban/rural	PPMED	<ul style="list-style-type: none"> <li>- Poverty reduction</li> <li>- Improved food security</li> </ul>

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
<b>11</b>	Percent of agricultural land developed under irrigation (formal and informal)		- Measurement of total developed irrigation area (formal and informal). -Obtain data on total agricultural land area.	- Realize the productive capacity of existing assets and respond to new demands for irrigated production.	GIDA, MiDA, DADU, RADU	Annual	- National - Regional	GIDA	Improved irrigation resulting in increased productivity.
<b>12a</b>	Total area developed under irrigation (formal and informal)	A4.3.1	- Measurement of total developed irrigation area formal and informal.	- Realize the productive capacity of existing assets and respond to new demands for irrigated production. - Efficient use of water at formal and informal irrigation sites.	- GIDA, MiDA - Water Resources Commission - DADU, RADU,	Annual	- National - Regional - Gender	GIDA	Improved irrigation, resulting in increased productivity
<b>12b</b>	Percent of developed area under irrigation cropped (formal and informal).	A4.3.1	- Measurement of effective irrigated areas. - Measurement of number of cropping cycle per year in irrigated areas.		- DADU - RADU - GIDA - MiDA	Annual	- National - Regional - District - Gender	GIDA	- Land intensification - Crop intensification - Diversification

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
12c	Volume of irrigated crops produced.	Nil	- Estimation of production from sample field of irrigated land, formal and informal.	- Realize the productive capacity of existing assets and respond to the new demands for irrigated production	- RADU, GIDA - Projects & programmes on irrigation - MiDA	- Annual GIDA/MOFA M&E - PSIA every three years	National, Regional, Commodity, Gender	GIDA, PPMED	- Land intensification - Crop intensification - Diversification
12d	Land intensification ratio in formal and informal developed irrigated areas		Baseline on intensification of existing irrigation schemes - No. of cropping cycles on existing formal and informal irrigated land.	Low productivity on existing irrigation schemes	- RADU, DADU, GIDA - Projects & programmes on irrigation - MiDA	Annual	National, Regional, District Commodity Gender	GIDA PPMED	- Land intensification - Crop intensification - Diversification

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
13	Adoption rate of water management technologies by users	Nil	<ul style="list-style-type: none"> <li>- Record data from DADU and directorates.</li> <li>- 2009 to 2015: number and nature of improved technologies demonstrated.</li> <li>- 2009: Baseline study report on adoption rate, including strategic recommendations to increase adoption rate.</li> </ul>	<ul style="list-style-type: none"> <li>- Improve the uptake of technologies by improving relevance of technologies to users and their access to the technologies.</li> </ul>	<ul style="list-style-type: none"> <li>- DADU</li> <li>- RADU</li> <li>- MiDA</li> </ul>	<ul style="list-style-type: none"> <li>- Quarterly, Annual for demonstrations.</li> <li>- Every 3yrs for adoption</li> </ul>	National, Regional, Gender, Technology	GIDA	Increased productivity
14	Percentage of Mechanization centers operational	Nil	<ul style="list-style-type: none"> <li>- Inventory of Mechanization Centers with a full complement of appropriate equipment established.</li> <li>- number of mechanization service centres operational</li> <li>- Total area cultivated per centre</li> </ul>	<ul style="list-style-type: none"> <li>- Access to mechanized agricultural services</li> </ul>	<ul style="list-style-type: none"> <li>- RADU</li> <li>- DADU</li> <li>- AESD.</li> </ul>	Annually	<ul style="list-style-type: none"> <li>- District</li> <li>- Regional</li> <li>- National</li> <li>- Ownership (Gender)</li> </ul>	AESD	Increased mechanisation

**Objective 2: Increased Growth in Incomes.**

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
15	Percent of total livestock units of improved breeds.	A 4.2.2	- Consult records of VSD for information on livestock imports	- High level of imported agricultural commodities	- VSD - APD	Annual	National	PPMED	Reduction in livestock imports
16	Percentage of national consumption of commodities that is imported. (Imports dependency ratio of major staples)	A 6.1.1	- Calculate the percentage of rice, maize, cowpea and tomatoes, poultry, pork , cattle products and fish that is imported	- High level of consumption of imported commodities	- VSD, - SRID - Fisheries Commission - MOTI	Annual	National	PPMED SRID	Reduction in livestock imports
17	Total Fish Production (mt)	Nil	- Marine - Inland Capture fisheries - Harvesting of Ponds - Import	- Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.	- Fisheries	Annual	- National - Regional	Directorate of Fisheries	Reduction in fish imports
18	Quantity of fish produced per unit area of pond per cycle.	A 4.2.3	- Record fish production for small and commercial water bodies.	- Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.	- RADU - DADU - DoF	Annual	- National - Regional	Directorate of Fisheries	Increased productivity

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
19	Total land area under fish farming under sustainable management	A 4.2.3	- Areas to be recorded.	- Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.	- DADU - RADU - DoF	Annual	- District - Regional - National	DoF	Increased fish production
20	Number of functioning Farmer Based Organizations (FBOs) and their access to services.	A 1.3.1 not exactly	- Number of functioning FBOs with membership disaggregated by gender. - Composition of FBOs. - Leadership of FBOs - % FBOs accessing financial services. - % FBOs accessing marketing information.	- Promote formation of viable FBOs with gender equity to enhance their knowledge, skills and access to resources along the value chain, and for stronger bargaining power in marketing. -	- RADU - DADUs - NGOs - MiDA	Annual Quarterly	- District - Regional - National - Gender -	DAES, PPMED	Stronger production and marketing systems

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
21	Percentage of Agric Investors (farmers, FBOs, processors, input dealers, etc) with access to services for agriculture and rural development	A 1.3.1 not exactly	- % of agricultural investors accessing financial services and marketing information	strengthen all actors along the value chain	-Financial institutions (BoG, ADB, Procredit, Barclays) - GSS - MOFA Projects - DAES - DOC - GIPC	Annual	Rural/Urban - District - Regional - National - Gender	SRID	Stronger production and marketing systems
22	Total length (kilometres) of good engineered roads linking district capitals a. bitumen b. gravel	A 4.4.1	- Determine the kilometers of motor able roads linking district capitals	- Access to markets - Timeliness of delivery to markets	Feeder Roads, Urban Roads	Annual	- District - Regional - National	PPMED	Improved access to markets
23	Percentage change in number and capacity of agro-processing (cottage industries) and agro-business enterprises established and operating per commodity per region.	Nil	- Record the number of cottage industries registered	- Value addition, - Rural industrialization	- DADU -RADU -NBSSI - District Assemblies - MMDAs - MOAP - MiDA - Registrar Generals Dept	Annual	- District - Regional - National	PPMED	- Improved rural industrialization - Value addition -Reduced rural-urban drift

**Objective 3: Increased competitiveness and enhanced integration into domestic and international markets.**

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
24	Percentage change in staple crop output of commercial and smallholders that is marketed	A 4.7.1	- set a baseline for volumes of produce marketed by commercial and smallholders - Determine volumes of staple crop marketed by commercial and smallholders	- commercial and Smallholder access to markets	DADU, RADU, DCS, SRID - GEPC	Annual	- National - Regional - District - Gender	SRID PPMED	Increased Incomes
25	Percentage change in export of non-traditional agricultural commodities	A 6.1.1	- Access data from relevant sources	- Export diversification	- GEPC, CEPS, BOG, PPRSD, VSD, - Commodity exporters associations	Annual	- Commodity	PPMED	Export diversification
26	Adoption rate of grades and standards along the value chain of major staple crops	Nil	- Set a baseline of level of sensitization and adoption of grades and standards - Assess level of usage of grades and standards in markets and communities	- Poor use of grades and standards - Promotion of grades and standards in marketing	GSB, GF&DB, WIAD, AESD	Annual	- District - Regional - National	PPMED	Promotion of standardization and grades

**Objective 4: Sustainable Management of Land and Environment.**

<b>Indicator number</b>	<b>Indicator</b>	<b>CAADP Indicator</b>	<b>Monitoring method and activities</b>	<b>Corresponding Issues and Strategies.</b>	<b>Sources of Information</b>	<b>Frequency of Monitoring</b>	<b>Level of Disaggregation</b>	<b>Responsible Agency</b>	<b>Expected outcome and impact</b>
27	Number of community land development plans developed and implemented		Record of data on plans developed and implemented for community land development	Progressive land degradation	DADU, RADU	Annual	National	PPMED	Sustained awareness creation on environment and land degradation
28	Number of Institutional capacity building programs promoted under SLM		Number of capacity building programs and target funds for operations by both public and private extension service providers	Low dissemination of policy and technology on SLM	PPMED EPA	Annual Quarterly	Districts, Regions and national	PPMED	Technical capacity of both public and private providers of SLM services enhanced
29	Number of multi-sectoral SLM committees established		Number of district, regional SLM committees established	Conduct beneficiary assessment of trainees	EPA DCS PPMED	Annual	Districts, Regions		Ensure cross-sectoral SLM mechanisms at all levels
30	Type and number of Incentives (grant) to support farmers switching to SLM approach		Number of farmers and their allocated grants for adopting SLM approach	Document and Low adoption of SLM technologies	DADU, RADU, CSD	Annual	Districts, Regions, National	PPMED	To quantify the number and the financial support system of SLM

**Objective 5: Science and Technology Applied to Food and Agriculture.**

<b>Indicator number</b>	<b>Indicator</b>	<b>CAADP Indicator</b>	<b>Monitoring method and activities</b>	<b>Corresponding Issues and Strategies.</b>	<b>Sources of Information</b>	<b>Frequency of Monitoring</b>	<b>Level of Disaggregation</b>	<b>Responsible Agency</b>	<b>Expected outcome and impact</b>
31	Share of government expenditure on agricultural research	A 3.2.1	Analysis of disbursements	- Relevant Demand-driven research, - Improved budgeting	CSIR, PPMED MoFEP	<b>Annual</b>	- National	PPMED	Improved Support for research
32	Percentage of agricultural problems resulting from RELC meetings along the value chain researched into	Nil	- Convening of meetings, - Plans of RELCs, - No of researched problems - Budget of RELCs - Record RELC meetings that deal with the value chain concept	Promote demand-driven research and improve the effectiveness of RELCs.	- RADUs, - RELC - CSIR	- Annually	- National - Regional - Gender	DAES CSIR	Farmer problems resolved, resulting in increased productivity

**Objective 6: Improved Institutional Coordination and Stakeholder Management**

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
33	Quarterly and annual Progress and Performance reports by MoFA submitted on time: -	Nil	<ul style="list-style-type: none"> <li>- Time of completion and dissemination of Regional and National report:</li> <li>- RADU &amp; Projects reports submitted to PPMED 15 days after end of each quarter and Annual Reports by end of January each year</li> <li>- Quarterly reports completed by PPMED 30 days after end of each quarter and Annual report by March each year</li> <li>- Disseminate Annual Report by 30<sup>th</sup> April to stakeholders</li> <li>- reports should indicate outcome of interventions under objectives and budget allocated to specific objectives and their expenditures</li> </ul>	- Delayed reports	- Agricultural stakeholders	Quarterly Annually	- National -RADUS -DADUS	PPMED	Informed Agricultural Stakeholders

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
34	Increase in awareness of stakeholders about MoFA's programmes/interventions	Nil	<ul style="list-style-type: none"> <li>- A functional framework for communication in place</li> <li>- Availability of budget</li> <li>- Releases of funds to support strategy implementation</li> </ul>	<ul style="list-style-type: none"> <li>- Insufficient communication within MoFA</li> <li>- Create awareness about communication strategy</li> <li>- Promote ICT use in Agriculture</li> </ul>	- All Directorates	Annual Quarterly	- National	PPMED	<p>Higher staff productivity</p> <p>Informed Agricultural Stakeholders</p>
35	Percentage of Agriculture trainees entering into agriculture	A4.9.1 Not exactly	<ul style="list-style-type: none"> <li>- Admission/graduation into and from the Agric Colleges and farm institutes</li> <li>- Proportion of trainees entering agriculture</li> </ul> <p>(Farming,, Fishing,, processing, marketing and Agricultural training)</p>	- Ageing illiterate farmers	- MoTI, FAGE, CSIR, RADUs, DADUs, HRDM, MoE	Quarterly, Annual	- District - Regional - National	HRDM	Well informed farmer workforce
36	Number of professionals per 1000 farmers (extension, research and trade)			Head count of professionals by category and gender	RADU, DADU, CSIR	Annual	- District - Regional - National	HRDM	Improve access to extension services by farmers

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies.	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
37	No. of requisite MoFA staff at post and unfilled positions by category and by sex	A4.9.2	- Reports and head count	- Inadequate numbers of requisite staff - Inability to implement human development strategy - Function MoFA Bio-database.	- All Directorates (RADU, DADU, National) - HRDM	Annual Quarterly	- District - Regional - National	HRDM	An efficient workforce
38	Number and position of staff participating in in-service training	A4.9.3	Record, at district, regional and national levels, in-service training topics, number, position, duration and gender of participants.	Bridge knowledge and skills gap through education and training tailored more closely to changing need of the sector.	DADU, RADU, Directorates, PPMED	Quarterly, annual	National, regional and district, by gender, by sub-sector.	HRMD	Outcome: Efficiency of training. *Impact: strengthened service quality and delivery  An efficient workforce
39	A functional platform for MoFA, MDA's, DP's, Civil Society and Private Sector in place.	Nil	- No. of functional joint committees	Inadequate collaboration between MoFA and the private sector	- All Directorates - Private sector practitioner	Annually	- National - Regional - Directorates	PPMED	Increased productivity

**7. Sub-sector Policies**  
**Agricultural Mechanization**

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
40	Running tractor to farmer ratio.	Nil	Record data from DADU and AESD. Inventory of running tractors -Number of farmers requiring tractor service	- Promote small-scale multipurpose machinery along the value chain. - Facilitate the establishment of mechanization services provision centers, and machinery hire-purchase and lease schemes.	DADU, RADU, AESD	Annual	National, regional, ecological zone Gender	AESD	- Increase in farm sizes - Improvement in ratio of subsistence/ commercial agriculture
41	Percentage of agricultural land area ploughed	A4.2.1	Record data from DADU and AESD.  -Area ploughed by tractors - area ploughed by draught animals	- Facilitate the establishment of mechanization services provision centers, and machinery hire-purchase and lease schemes.	DADU, RADU, AESD	Annual	National, Regional, ecological zone Gender	AESD	- Increased farm sizes - Improved in ratio of subsistence/commercial agriculture

### Access to Agricultural Inputs

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
42	Change in value and volume of total agricultural exports and imports (fertilizer, weedicide, pesticide, animal feed, processing equipment and food)	A6.1.1	Data to be collected from GEPC, CEPS, MoTI	- Strengthen surveillance of agriculture input trade and use.	GEPC, CEPS MoTI	Annual	National	PPMED	- Increased yields and agricultural trade
43	Percentage change in quantity of fertilizer use per unit land area	A4.2.1	-Record Area cultivated -Quantity of fertilizer used by type	-Low usage of fertilizer among farmers	-DAES, -DCS -PPRSD -DADU -RADU	Annual	- National - Regional - <b>District</b>	PPRSD	Increased yields/ productivity
44	Level of satisfaction scoring of actors along the value chain in input supply and distribution system	A1.1.1	Data from beneficiary assessment in selected districts of each region.	- Facilitate the creation of the enabling environment for the establishment of input shops in the district.	PPMED, SRID, DADU, RADU, PPRSD	2 years	- National - Regional - Ecological zone, - Gender	PPMED	- Increased yields
45	Number and distribution of input outlets and sale points.	Nil	Record formal and informal agriculture input outlets per district and consolidate data at the regional level.	Facilitate the creation of the enabling environment for the establishment of input shops in the district.	RADU, DADU	annual	- National - Regional	PPMED	Increased production

### Gender Mainstreaming

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
46	Number of female AEAs with improved condition of service	Nil	Gender balance in staff recruitment and training, including curricula	Number of female AEAs with official accommodation and motorbikes.	- DADU - RADU	Annual	- National - Regional - Gender.	PPMED	Special needs of women farmers addressed
47	Percentage change in the collection and use of gender disaggregated data in all agric. Research and survey	Nil	Integration of gender methodology in MOFA and contract in research and survey -Publication of annual reports, statistical information and research with sex disaggregation	-Prioritize key gender mainstreaming strategies annually for implementation	DADU, RADU, Directorates	Annual	- National - Regional - District	PPMED SRID	Special needs of women farmers addressed
48	Number of female participation in MoFA programmes	Nil	. - Increase in and development of new agro-based products for domestic markets.	Prioritize key gender mainstreaming strategies annually for implementation	WIAD DADU RADU	Annual	- National - Regional - District	PPMED	Special needs of women farmers addressed

**8. Cross-cutting Policies**  
**Macroeconomic Policy**

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
49a	Share of agricultural budget and expenditure in total government budget and expenditure	A3.1.1	Record yearly contribution approved by Parliament and disbursed.	Agriculture sector as basis for economic growth in GPRSII.	-MoFEP - Budget Unit, PPMED -FC, MoFA	Annual	National, regional, District (DACF)	PPMED, Finance Directorate	Improved performance of the agric sector
49b	Share of private and public agricultural expenditure in agriculture GDP	A3.1.6							
49c	Share of ODA for agriculture in total ODA and Agriculture GDP.	A3.1.4							
50	Percentage of MOFA's budget allocated and released to regions and districts	Nil	Record yearly budget allocation and disbursement by MOFA. Contribution approved and released by MOFA.	Agriculture sector as basis for economic growth in GPRSII and decentralized financial process.	- National account - Budget Unit of MOFA - Finance Directorate	Annual Quarterly	*- National - Regional - District	- PPMED - Finance - Directorate	Increased productivity
51	<b>Proportion of MOFA budget released compared to approved</b>	Nil	Record budget and financial data.	Improved financial and development programme implementation efficiency.	- RADU -DADU - MOFA - PPMED - Budget Unit of MOFA.	Annual Quarterly	- National - Regional - Sub-sector	Finance Directorate	

Indicator number	Indicator	CAADP Indicator	Monitoring method and activities	Corresponding Issues and Strategies	Sources of Information	Frequency of Monitoring	Level of Disaggregation	Responsible Agency	Expected outcome and impact
52	Proportion of planned activities implemented	Nil	Record number of activities implemented compared to plan at DADU level, consolidated at RADU level.	Improved financial and development programme implementation efficiency.	DADU, RADU, Directorates	Annual	- National - Regional - District	PPMED	Increased production and income
53	Extent to which Lessons learnt from M&E exercise effectively incorporated in following year's strategic planning	Nil	Lessons learnt are indicated in annual and quarterly MOFA reports and submitted to RADU, Directorates for discussion and incorporation in the following decentralized MOFA planning (Strategic Planning).	Improve M&E as a management/ development tool.	PPMED, MOFA	Annual	National	PPMED	- M&E development management tools Impact: improved sector development planning
54	Evaluation of MOFA performance and contribution to National Development and MDG targets.  Percentage contribution of agric sector to national development and the MDG targets.	Nil	MOFA annual report captures and analyzes at least 90% of the indicators in its new monitoring and evaluation framework, with the level of disaggregation indicated  Participatory workshop on MOFA performance with regional participation.	Improve M&E as a management/ development tool.	PPMED, SRID, Directorates, RADUs, Agriculture Programmes and projects	Annual	National, regional, gender, social groups, ecological zones	PPMED	- Contribution of sector towards GPRS and MDG targets.

<b>Indicator number</b>	<b>Indicator</b>	<b>CAADP Indicator</b>	<b>Monitoring method and activities</b>	<b>Corresponding Issues and Strategies</b>	<b>Sources of Information</b>	<b>Frequency of Monitoring</b>	<b>Level of Disaggregation</b>	<b>Responsible Agency</b>	<b>Expected outcome and impact</b>
55	Contribution of agriculture to GDP and real GDP growth rate (AgGD).	A5.1.1	Record macro-economic data.	Agriculture sector as the engine of growth.	MoFEP	Annual	-Sector - sub-sectors	PPMED	Enhanced GDP

**Land Policy**

<b>Indicator number</b>	<b>Indicator</b>	<b>CAADP Indicator</b>	<b>Monitoring method and activities</b>	<b>Corresponding Issues and Strategies</b>	<b>Sources of Information</b>	<b>Frequency of Monitoring</b>	<b>Level of Disaggregation</b>	<b>Responsible Agency</b>	<b>Expected outcome and impact</b>
56	Percentage change of time to conduct a land transaction by activity beneficiary.	Nil	Days spent to purchase, rent or sell a parcel of land from initiation of negotiation with current landowner to registration in title or deeds registry of the property right acquired as compared to days stipulated in charter.	Ability and interest in investing in agricultural land development.	Land Commission, MCA.	Annual From 2007	National, regional	Land Commission	More effective land administration
57	Percentage change in the number of women who have gained access to and control over land for agricultural purposes.	Nil	- To be defined in 2010 for data capture. Possible measurement: Increase in the number of women who have gained access to and control over land - Rights based information sessions i.e.: land rights with women farmers - Availability of information on women's land rights in PPMED	Equitable access to agricultural land for agricultural investment.	To be defined	Annual From 2008	National, regional, gender.	Land Commission	

**HIV/AIDS**

<b>Indicator number</b>	<b>Indicator</b>	<b>CAADP Indicator</b>	<b>Monitoring method and activities</b>	<b>Corresponding Issues and Strategies</b>	<b>Sources of Information</b>	<b>Frequency of Monitoring</b>	<b>Level of Disaggregation</b>	<b>Responsible Agency</b>	<b>Expected outcome and impact</b>
58	Number of farmer's households sensitized on HIV/AIDS	Nil	Record number of sensitization sessions, number and gender of participants by region.	Incidence of HIV/AIDS and its negative impact on agricultural production. Create awareness and sensitize stakeholders on preventive measures	DADU, RADU, DAES	Quarterly, annual	National, regional, gender. District (2008)	DAES	Reduction in the incidence of HIV/AIDS

### 2.5 M&E Calendar and Work Plan

Activities	Time Frame					Actors	Budget, GH¢'000
	2011	2012	2013	2014	2015		
Local training for staff	←→					PPMED	97.7
Foreign training for staff	←→					PPMED	152.7
Design electronic data capture, analysis and reporting template	↔					EWB/PPMED	9.2
Train district and regional staff on electronic data capture, analysis and reporting template	◀					EWB/PPMED	91.6
Install electronic data capture, analysis and reporting template	*					EWB/PPMED	21.4
Prepare quarterly and annual reports	←→					PPMED/MEC	793.7
Organize monitoring visits to regions and districts	←→					PPMED/MEC	244.2
Undertake periodic evaluation of programme activities	←→					PPMED/MEC	630.0
Undertake beneficiary assessments	←→					PPMED/MEC	456.1
Conduct annual joint sector review						PPMED/MEC	465.2
Total	↔	◀	↔	▶	↔		2,961.6

## 2.6 M&E Budget

A total amount of two million, nine hundred and sixty-one thousand six hundred Ghana cedis would be needed to implement the M&E Plan for the programme period. Details of the cost breakdown are indicated in the table below.

OUTPUT	KEY ACTIVITIES	SUB-ACTIVITY	Cost, GH¢					Total cost, GH¢
			2011	2012	2013	2014	2015	
Local training for staff organized	Identify institutions		0.5	0.6	0.6	0.7	0.7	3.1
	Carry out needs assessment		2.5	2.8	3.0	3.3	3.7	15.3
	Organize training		12.0	13.2	14.5	16.0	17.6	73.3
	Monitor training of staff		1.0	1.1	1.2	1.3	1.5	6.1
Sub -total			16.0	17.6	19.4	21.3	23.4	97.7
Foreign training for staff organized	Identify institutions		1.0	1.1	1.2	1.3	1.5	6.1
	Carry out needs assessment		0.5	0.6	0.6	0.7	0.7	3.1
	Organize training		22.0	24.2	26.6	29.3	32.2	134.3
	Monitor training of staff		1.5	1.7	1.8	2.0	2.2	9.2

OUTPUT	KEY ACTIVITIES	SUB-ACTIVITY	Cost, GH¢					Total cost, GH¢
			2011	2012	2013	2014	2015	
Sub -total			25.0	27.5	30.3	33.3	36.6	152.6
Electronic data capture, analysis and reporting template designed			1.5	1.7	1.8	2.0	2.2	9.2
District and regional staff trained on electronic data capture, analysis and reporting template			15.0	16.5	18.2	20.0	22.0	91.6
Electronic data capture, analysis and reporting template installed in all districts and regions			3.5	3.9	4.2	4.7	5.1	21.4
Sub -total			20.0	22.0	24.2	26.6	29.3	122.1
Quarterly and Annual Reports prepared and disseminated	Prepare and disseminate four quarterly reports	Prepare first quarter report and disseminate	15.0	16.5	18.2	20.0	22.0	91.6
		Prepare second quarter report and disseminate	15.0	16.5	18.2	20.0	22.0	91.6
		Prepare third quarter report and disseminate	15.0	16.5	18.2	20.0	22.0	91.6
	Prepare annual report and disseminate		85.0	93.5	102.9	113.1	124.4	518.9

OUTPUT	KEY ACTIVITIES	SUB-ACTIVITY	Cost, GH¢					Total cost, GH¢
			2011	2012	2013	2014	2015	
Sub -total			130.0	143.0	157.3	173.0	190.3	793.7
Monitoring reports prepared and disseminated	Quarterly monitoring visits organized		40.0	44.0	48.4	53.2	58.6	244.2
Evaluation reports prepared and disseminated	Evaluations carried out	Prepare terms of references for mid-term and end of programme evaluations	0.2	0.2	0.2	0.3	0.3	1.2
		Evaluate EOI	2.0	2.2	2.4	2.7	2.9	12.2
		Award contracts	50.0	55.0	60.5	66.6	73.2	305.3
		Supervise contracts	2.5	2.8	3.0	3.3	3.7	15.3
		Review evaluation reports	3.5	3.9	4.2	4.7	5.1	21.4
		Disseminate evaluation reports	5.0	5.5	6.1	6.7	7.3	30.5
Sub -total			103.2	113.5	124.9	137.4	151.1	630.0
Beneficiary assessments carried out and report disseminated	Carry out beneficiary assessment surveys	Prepare terms of reference	0.2	0.2	0.2	0.3	0.3	1.2
		Evaluate EOI	2.0	2.2	2.4	2.7	2.9	12.2

OUTPUT	KEY ACTIVITIES	SUB-ACTIVITY	Cost, GH¢					Total cost, GH¢
			2011	2012	2013	2014	2015	
		Award contracts	60.0	66.0	72.6	79.9	87.8	366.3
		Supervise contracts	3.5	3.9	4.2	4.7	5.1	21.4
		Review evaluation reports	4.0	4.4	4.8	5.3	5.9	24.4
		Disseminate evaluation reports	5.0	5.5	6.1	6.7	7.3	30.5
Sub -total			74.7	82.2	90.4	99.4	109.4	456.1
Annual Joint Sector Reviews carried out		Prepare terms of reference	0.2	0.2	0.2	0.3	0.3	1.2
		Field visits by groups	45.0	49.5	54.5	59.9	65.9	274.7
		Report writing by groups	1.0	1.1	1.2	1.3	1.5	6.1
		Report presentation and review	25.0	27.5	30.3	33.3	36.6	152.6
		Report dissemination	5.0	5.5	6.1	6.7	7.3	30.5
Sub -total			76.2	83.8	92.2	101.4	111.6	465.2
<b>Total</b>			<b>485.1</b>	<b>533.6</b>	<b>587.0</b>	<b>645.7</b>	<b>710.2</b>	<b>2,961.6</b>

## **2.7 Data Collection**

For each indicator to be measured in both sector M&E matrix and M&E report, a series of data has to be collected. Data collection is a core component of a monitoring system. The main challenge is how to take advantage of existing data sources and plan for additional data collection to maximize its use for results-based monitoring. Most of the primary data collection is the responsibility of the Statistics research and Information Directorate (SRID) and PPMED and technical directorates of the MDA and it is based on the implementation of the Sector Development Plan.

At the community level, data are collected by AEAs. SRID supervises data collection for indicators related to annual crops and prices. It is envisaged that data collection formats would be developed for indicators that would be collected by AEAs. Additionally, electronic data capture, analysis and reporting templates would be developed to ease and expedite the process.

At the district level, data are collected by DMISO.

At the regional level, additional data are collected by M&E officers. SRID and technical directorates are also involved in data collection at the central level.

Beside data collection within decentralized MOFA, agricultural programmes and projects are also collecting data. Other data can also be found with the private sector and in special studies conducted by specialized institutions and Universities.

## **2.8 Data Analysis**

The electronic data capture, analysis and reporting template would be used in the analysis of data. The template would assist in the aggregation of data from AEA level to district and then to regional and national levels. District staff would be taught to do simple analysis of their respective data and make inferences to inform management decision-making process.

## **2.9 Reporting**

Reporting is the main visible result of M&E for most of the development agents, partners and beneficiaries, who are also the users of the monitoring and evaluation results. Quality data and timely reporting using user friendly report template, as well as wide dissemination and feedback of report to users, are the main conditions for a useful and interesting M&E system. Keeping the interest of the users in M&E is the main condition to maintain a sustainable M&E process with active participation.

The major reporting documents to be prepared are the quarterly performance review reports, Bi-annual Reports and the Sector Annual Progress Reports. The purpose of M&E reporting is to:

- Provide information for assessing the performance of the sector.
- Assess impact on policies to intended beneficiaries.
- Provide inputs into future policy formulation.
- Deduce lessons learned for continued implementation.

Each implementing agency reports its program information monthly. It is then compiled and analyzed quarterly for quarterly review and semi-annual compilation to support the reporting requirements of the program.

Sector meetings will be held to discuss draft reports with specific emphasis on policy recommendations. The Annual Progress Report will be submitted to NDPC and other key stakeholders for further review. Comments received will be addressed and a final report prepared and incorporated into the National APR for publishing and dissemination.

Once the first draft of the evaluation report is submitted, the Sector PPMED should analyze and incorporate stakeholder comments. After comments are incorporated, the final draft version will be circulated among development partners to obtain their valuable feedback. The Director PPMED will be responsible for incorporating comments into the final version of the report, and then for submission to NDPC.

The report shall set forth the performance indicators established by MOFA along with actual programme performance achieved compared to performance goals in their plans for the previous fiscal year.

#### Quarterly Performance Reports

Quarterly reports will be prepared by the PPMEDs and DPCUs responsible for Project/ Programme implementation as against its budget and the status of work/ services achieved.

#### Implementation Completion Reports

This is to assess on the quality and performance ratings of completed projects or activities, collect data for aggregate analysis, lessons learnt and recommendations for future implementation activities. Project completion reports are to be submitted two months after the completion of the project.

### **2.10 Evaluation**

Within the Sector Plan timeframe, evaluations will be undertaken selectively to answer specific questions to guide decision-makers and/or programme managers, and to provide information on whether underlying theories and assumptions used in programme development were valid, what worked and what did not work and why? It is envisaged that some of the evaluations will be outsourced to external consultants. However, with time, capacity would be built within to perform such functions.

The following evaluations, but not limited to, would be carried out:

- a. Mid-term evaluation;
- b. End of programme evaluation; and
- c. Beneficiary assessment etc

#### Reporting and dissemination

Reporting and feedback on the outcome of the assessment would be provided to all involved stakeholders. Evaluation activities continue after the report is submitted. Share evaluation findings with would be shared with partners, clients/beneficiaries and other stakeholders. Synthesised versions would be prepared and presented to senior management, and technical staff. Other media for dissemination would include bulletins, memoranda, email messages, question and answer statements, press releases, web postings, etc. Actual data and careful documentation of methods of analysis should also be made available to the general public and research institutions on request.